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**FOREIGN
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Soviet Union

Economic Affairs

Soviet Union

Economic Affairs

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ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

Lease Law Will Foster Sense of Ownership, Worker Incentive

904A0095A Moscow PRAVDA in Russian
7 Dec 89 Second Edition p 2

[Interview with P.G. Bunich, corresponding member of the USSR Academy of Sciences and deputy chairman of the Committee of the Supreme Soviet for the Economic Reform, by A. Nikitin: "The Philosophy Behind Leasing"; date and place not given]

[Text] Following the hot debates, the USSR Supreme Soviet has adopted the Law on Leasing. It became the first of the entire package of legislative bills on the problems of the radical economic reform. This law was published in the press a few days ago. The editors of PRAVDA asked P.G. Bunich, deputy chairman of the Committee of the Supreme Soviet for the Economic Reform and corresponding member of the USSR Academy of Sciences, to answer a number of questions concerning the importance of leasing in the present stage.

[Nikitin] So, what is it that has at this point aroused our profound interest in this form of economic relations? After all, leasing has been well-known to humanity, probably since the primitive communal system. What is this? Is it a going back, or, on the contrary, is it a search for a fundamentally new role and place of leasing under the conditions of socialism?

[Bunich] The latter, of course. In all the countries that surround us, leasing occupies a "normal" and natural place. There, the attitude toward leasing is rather a technical one. You can lease a car, an apartment.... Anything you like. But this does not change production relations at all....

[Nikitin] How about the renting of baby carriages in our country, for example?

[Bunich] Yes. Except that the scale of leasing is very great in many countries. Still, it runs there in a different channel. For us, leasing is the principal tool for changing our production relations, which have become fairly stiff. After all, the state sector, unfortunately, does not want to really work. And the question arises: What to do with it? Enterprise directors are demanding: turn over all the property of the state to the collectives. After all, they have created it and paid for it with their labor, what more is required? But enterprises have a widely differing supply of capital. And not because some have themselves earned their capital, while others, as they say, have been naked since birth. Sometimes not even because they have performed poorly. Take a hydropower plant. It has fewer than 100 workers, but the capital runs to millions of rubles.

[Nikitin] When they leave, then, they will each take a million?

[Bunich] That is what it works out to, if we give it away....

[Nikitin] But all heavy industry is very capital-intensive?

[Bunich] That is its distinguishing feature. And spacecraft? It is flown by three cosmonauts.... Can we give them their spacecraft? They, of course, would like to be given it. And soon, when they retire, they would receive the value of the "Buran" together with the space launch center? This is no joke, but serious arguments. And who gets the subway? Who gets the railroads? And who, so sorry, only a shoe shop? It is on the ground floor of my house. What is there except broken chairs and dirty draperies? And all because they did not create anything else? The reason would seem to be different. The distributive role of the state in developing various regions and sectors was immense. Magnitka was on the one hand built up, while Tmutarakan on the other was ignored. In some places, Demidov plants are still puffing away, while in others there are plants like VAZ and KamAZ. So, did they build them themselves? On the other hand, did many plants in the Urals condemn themselves to vegetate in their humiliation? So there it is, can we simply close our eyes and just give away everything gratis? If so, we would immediately create new millionaires and new beggars. That would be unfair. However, that kind of distribution has already begun. We have to go back to those hasty decisions and support only those that are strictly justified.

[Nikitin] What is the way out?

[Bunich] With leasing, if someone has obtained a new plant, no one can say that anyone has been robbed. Why? A new plant means that plenty of money will be paid for it. And if he has received land in the Kuban, then how much will he pay for it? Possession of the land takes the form of leasing through the medium of the rent. And how much for land in the Far North? And who can be offended in this case?

[Nikitin] Leasing gives rise to many other problems. For instance, we have 60 million pensioners. What will we give to them? But surely they have earned something of their own when our legacy is divided up?

[Bunich] Right, they are more deserving than we are. But everything will go to young people who have come to the plants recently. But that is the case if everything is given away. And how about the contribution, say, to collective property of those who are no longer alive? Give it to their descendants? But how is one to find them? Those problems will not exist if the plants are leased. Thanks to leasing, we will give everyone the same conditions at the outset. Prove what you can do.

[Nikitin] What do you mean when you say "prove"?

[Bunich] The best collective will be the one that adds more of its own newly created value—income, to the

"wedge" it has received from the state through leasing, the one that builds prospects for its development. They have earned more—both more for today and more for tomorrow.

[Nikitin] But won't they let everything go for the sake of today?

[Bunich] No, anyone who fails to think about technical progress is undermining his wages tomorrow. Eating everything up and running off to another plant is no way out, since at the other plant they are not keeping on anyone they do not need, and they are not looking for people from outside. Order will have to be restored at home. Why are the cooperatives full of vitality? Because they have precisely that system. The entire working world lives that way. But when you live out of someone else's pocket, your own pocket is small, people do not work, but at the same time they make every effort to pick someone else's pocket. When there is a life preserver, then no one knows how to swim, or, more accurately, no one wants to.

[Nikitin] All the lessees, finding themselves in deep water, will immediately start swimming?

[Bunich] I think that when the worker realizes that tomorrow is his problem, not the problem of the instructor from the party obkom or Central Committee, not the problem of the minister, then he himself will think about his future. It is another matter to protect the disabled, to prevent unemployment, to provide housing to a man who is poor. But under the guise of social welfare you cannot kill in a man his concern about the future....

[Nikitin] But if income is the property of the leasing collective, then the fund for development could also be regarded as collective property?

[Bunich] It can and must be. That contains a new incentive for accumulation, not for consumption. Marx wrote in the Critique of the Gotha Program that every member of the future society will receive from society exactly as much as he himself has given. After all the necessary deductions have been made. They exist in the form of a tax. So why have we been taking away from the worker the value of his surplus product? After all, the development fund is a sizable portion of the surplus value.

[Nikitin] Which means that the worker has been exploited? But by whom?

[Bunich] Of course, it was not Stalin or Brezhnev who were the exploiters. After all, the term "treasury" existed before their time. Exploitation was done not only by private property, but also by public property. To be sure, nowhere and never was there such public property that it subordinated to itself...the entire country. That has been our "achievement." And we will not spot any specific exploiter with a personal physiognomy, with greedy and trembling hands. Everything is appropriated by the

system as a whole: it is a system that has been ruining everything and drinking up everything. It is a system that lays the foundations for buildings that are forever under construction and the magnificent building projects of the century. They are just like the Egyptian pyramids. They produced almost nothing except losses and devastation. The public system that lacks a face or talent is the most terrible exploiter.

[Nikitin] Could we move from general phrases about property to a specific mechanism for use, to give everyone an incentive?

[Bunich] If the development fund is divided up into securities (shares of stock), then you receive dividends on them. What kind of dividend? More, of course, than in a bank. Otherwise you would not put anything in the development fund; on the contrary, you would take it all to the bank.

[Nikitin] In short, under the new conditions the development fund can remain in existence only so long as the dividends on it are higher than the interest rates in the bank? And if the enterprise closes down?

[Bunich] Then the workers come and say: Each of us has so much and so much, we are selling an enterprise. They put the proceeds in their pocket. They tear up the shares of stock and throw them in the wastebasket. They no longer yield anything, no income. At that point, the workers simply divide up the last loaf, you might say. It does not matter if the face value was "1,000 rubles," and you have worked to the point of exhaustion, and then when it closed down, there was not even 100 rubles for each of you. Is that clear?

[Nikitin] At this point, we do not have a securities market. Which means that the shares of stock do not have an exchange value?

[Bunich] True, we do not as a matter of fact have a securities market, they are not in circulation, and there is no bidding on them. It is leasing that puts this item on the agenda. This is, after all, only the first class, so to speak, of commodity-money relations. Shares of stock go for one price today, tomorrow they may bring half as much or twice as much. Or even five times as much. Depending on the kind of dividend that share of stock yields to the worker. Consequently, securities are tomorrow's wages, deferred wages. You retire, and you have 30,000 in your pocket. Then the individual will see the development fund as a friend and ally, not as a masked expropriator.

[Nikitin] Another way of looking at it is that the shares of stock are a kind of second pension system. One might say a personal system?

[Bunich] Right! There are two types of stock. The new ones we have been talking about now, which are earned under the conditions of leasing, are not sold, but are issued. Why? You cannot sell a man what he has already created, taking it away from himself and putting in the

development fund. Where did that fund come from? Did anyone prevent him from dividing up his income differently? He could have taken more for himself and put it in his pocket, the development fund would have been still smaller. So that everything he has put into the development fund he has taken out of his wages. That is, he cannot purchase the development fund, he has already paid for it with his wages. That is why these shares of stock are not being sold, but are being issued to those who have earned them. So that this is a new type of stock. And only in the law are these shares of stock referred to as securities. So, when you retire, you put your securities on the table, and you get money for them.

[Nikitin] And might there be another arrangement?

[Bunich] It cannot be precluded that certain collectives might propose in their bylaws: leave the stock or pass it on to your heirs. If the father has died, the son is now working....

[Nikitin] More than once in the plants in Perm I have leafed through the "golden books" of worker dynasties. People work in the same plant from generation to generation. The total length of service of their families runs to 100, 200, or 300 years. There is a logic to this: the plant, the place where you live, the sense of your native place, traditions....

[Bunich] And now in leased enterprises the shares of stock will be another bond. Which brings me to the topic of what in the future will really maintain such dynasties.

[Nikitin] They will then have their own economic basis?

[Bunich] It might be put that way. That is an apt way of putting it. And what if we go still further? Say a man leaves the plant before he has reached retirement age. What will be his case? The deputies have decided: the settlement procedure is defined by the enterprise's bylaws.

[Nikitin] The detailed implementation of the law has been left to collectives themselves?

[Bunich] Yes, the bylaws may even provide that you get your money if the plant is liquidated. Or: you get it when you retire. And there may be a third possibility, you get it whenever you like.

[Nikitin] So, you make a clear distinction between the "master" and "owner" [khozyayin and sobstvennik]?

[Bunich] No, I join them together. Once he is a lessee, then ownership of his income is already guaranteed. Anyone who leases capital is already a full-fledged master, and then after partial purchase he is still a master and a partial collective owner. And finally, when the purchase is complete, he is a full-fledged collective owner. Almost all small enterprises can become the property of collectives, and I believe that this is true of most medium-sized enterprises. As much as 70 percent of all state property. But there will be sectors and branches which will remain state-owned. Can we lease a

cruiser or an army, the Academy of Sciences, space, or communications? There will evidently also be facilities which can be leased, but which cannot be purchased. In the final analysis, the lease is the universal form of the transitional period. It will make it possible for man to overcome the alienation of property.

[Nikitin] Might there also be other approaches?

[Bunich] It would have approximately the same meaning if the state were to proclaim its equity to be the state's stock, on which dividends would accrue, and everything that the lessees added would be their stock, which would have its dividends.

[Nikitin] Tell us what the relationship is between the Law on Leasing and the draft law on property. After all, leasing is gradually solving all those problems.

[Bunich] To give a brief answer, leasing is precisely that specific mechanism which results in the creation of truly collective property. All the forms of property allowed by the future Law on Property will be subject to leasing.

[Nikitin] If you are convinced of the favorable impact which leasing will have, then why has the number of leasing collectives in industry and in agriculture literally become stuck? Did the interest in leasing fall off even before the law was born? Or are there other reasons?

[Bunich] I was waiting for that question. It is important in order to distinguish the so-called present "leasing," which is rigidly limited from above by the administration, from real leasing, to which the road is now opened up by the law. And it is precisely the way of getting out from under the dictate of the ministry.

[Nikitin] But is there a guarantee that the bureaucrat will not shelve this law as well, that he will not build a fence of instructions around it?

[Bunich] Since people have long ago ceased to believe in the firmness of our legislation, the law provides that the transition to leasing will be implemented by bodies empowered to do this by the people themselves. If they begin to "pull the elastic," to ignore the deadlines for examination of leasing applications, the dispute will be settled by state arbitration (not by economic arbitration, which is subordinate to branch departments). The law states: leasing collectives are the legal successors of those they have come to replace. This specifically signifies protection of their rights to centralized supply. The law envisages another instrument to protect the lessees: subsequent decisions from above that worsen their position do not extend to them. And still.... I am very much afraid of sabotage by the ministerial bureaucracy. It is so resourceful that all the bars which it might erect along the road of leasing cannot even be foreseen in advance. Recently, a new one was thought up: structural units, as is well-known, have the right to apply for leasing. In order to paralyze them, these units began to be eliminated as juridical persons. It has to be urgently provided that structural units may not be deprived of the rights of

a juridical person without the consent of lower-level collectives. The law states: the state order may not be greater for the leasing collective than the one previously established, and so it does not extend to the growth of "own" property. But even here the overstretching has begun already.

[Nikitin] If leasing makes the branch ministries afraid of losing their operational authority, is it not better to make the financial and banking organizations the lessors?

[Bunich] Neither of them actually has anything to lose from leasing. And from a professional standpoint they are altogether suitable for the role of lessors. But the financial authorities are better. After all, it is to them that the rent and taxes will go. But even that is not enough. There is a danger that the new lease will not be able to become full-fledged unless there is a reform of pricing and taxation in the very near future. A statute urgently needs to be adopted on the taxes to which lessees are subject, even though it be temporary....

[Nikitin] Only reality will show how successfully the new law has been drafted. It is wiser.

[Bunich] Something will surely have to be elaborated and spelled out. But that is better than marking time or retreating.

INVESTMENT, PRICES, BUDGET, FINANCE

Relative Proportions of Tax Revenues Examined

904A0065A Moscow PRAVITELSTVENNYY VESTNIK
in Russian No 22, Nov 89 pp 4-5

[Article by V. K. Senchagov, chairman of the USSR State Committee on Prices: "A Monologue About Tax"]

[Text] Any advanced forms of management will not be able to develop in full force, will rapidly peter out, and will not become universally widespread if the system of economic regulation, which includes prices, taxes, credit, subsidies, the currency rate, and so forth, is not improved. Let us examine only one of the economic

regulators—the tax system. Taking taxes out of the entire system of economic regulators, we permit a simplification and, therefore, our conclusions should be refined as the interconnection of taxes and prices, taxes and credit policy, emission and taxes, and so forth is analyzed.

We will clarify this, using the interaction of monetary emission and tax policy as an example. If there is a shortage of funds for financial backing for economically substantiated expenditures (I stress, not any expenditures, but only urgent ones, that is, strictly determined—pensions, allowances, and so forth), a very complex financial situation arises.

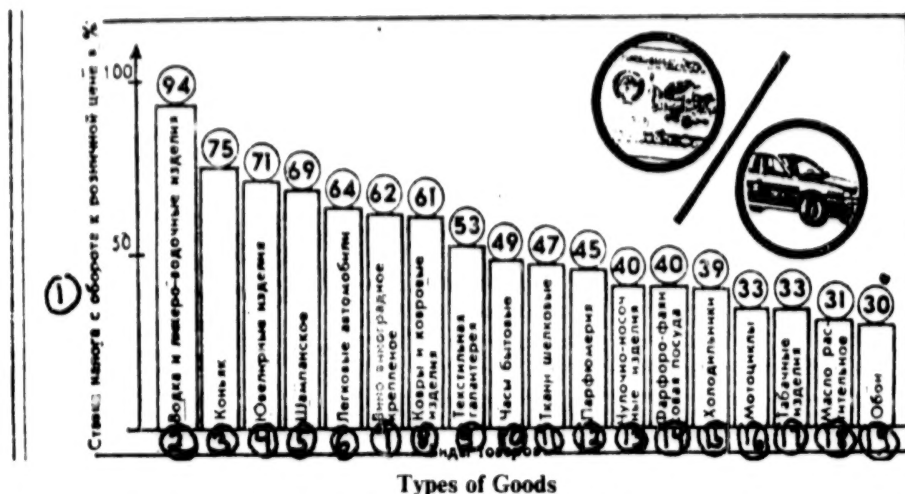
We will try to scientifically describe the existing tax system. After all, a conclusion on the directions of the tax reform should be drawn only on the basis of an analysis of a really existing taxation system. It can be determined whether it is good or bad only if there is an appropriate measurer—a mirror, by means of which everyone can see his face and all those who wish so can see and compare these faces.

In our country tax measurements are now limited to data on the share of taxes on the population and of payments into the budget in the total sum of its revenues. Throughout decades our finance workers flaunted an extremely small share of the tax on the population in budget revenues—7-8 [percent] (now, in connection with the rapid wage increase, more than 10 percent). However, this indicator is not very informative. It creates a false idea, because it has been taken out of the tax system and separated from prices, the turnover tax, and, above all, the system and level of wages.

It seems that the ratio of the sum of taxes to the gross national product as the sum of the national income and the depreciation fund can be a much more qualitative measurer. We will call such an indicator the taxation level and will agree that it can be calculated not only for all taxes, but also for their components. With due regard for financial and economic world practice this indicator should be introduced into the management system and legalized in financial statistics.

We will record general and differentiated taxation levels in the USSR as of 1987 and 1988:

	1987		1988	
	Billion rubles	Taxation level in percent of GNP	Billion rubles	Taxation level in percent of GNP
I. Gross national product	825		866	
II. Turnover tax	94.4	11.5	101.0	11.7
III. Payments of state enterprises and organizations from profit (income)	127.4	15.5	119.6	13.9
including payment for production resources	41.7	5.0	44.3	5.1
IV. State taxes on the population	32.5	4.0	35.9	4.2
V. State social insurance funds	28.1	3.4	30.1	3.5
General taxation level		34.2		33.1



Key:—1. Turnover tax rate in relation to retail price in percent—2. Vodka and liqueur and vodka products—3. Cognac—4. Jewelry—5. Champagne—6. Passenger cars—7. Fortified grape wine—8. Carpets and carpet articles—9. Textile haberdashery—10. Household clocks—11. Silk fabrics—12. Perfumery products—13. Hosiery—14. China and earthenware—15. Refrigerators—16. Motorcycles—17. Tobacco products—18. Vegetable oil—19. Wallpaper

The recording of taxation levels makes it possible, first, to present taxes as a system of mutually communicating vessels; second, to answer the question as to whether the population and enterprises pay much or little taxes and which one of them makes the basic contribution to the common money-box; third, to analyze the effect of the undertaken financial measures on economic growth both on a global scale and in individual sectors; fourth, to compare countries according to the taxation level.

In our country taxes on the population comprise 4.2 percent of the GNP, which is one-half of those in the United States and almost one-fifth of those in Sweden. However, this does not at all mean that we have a big reserve of tax strength and can embark on a headlong increase in taxes on the population. The whole point is that our relatively small direct taxes on physical persons are combined with huge indirect taxes. As can be seen from the table, the share of the turnover tax in relation to the GNP in 1988 made up 11.7 percent. A similar indicator in the United States is only 0.7 percent. True, it should be taken into consideration that in the United States there is also an inheritance tax much bigger than ours, but it makes up only 0.1 percent of the GNP.

As compared with other capitalist countries, only in England and Sweden is the tax on goods and services higher than in our country and in Japan in 1985 it made up only 3.9 percent. As is well known, Japan's government wanted to increase this tax, but the population actively opposed it and killed this bill.

Look at the histogram. It shows quite clearly that we have a very narrow group of taxable goods (only 18 types), but on the other hand the share of the tax in their retail prices is very big. Of course, this is the simplest, but the least civilized, method of collecting taxes. An especially substantial financial load falls on motor vehicles, textile haberdashery, carpets, and jewelry. At the

same time, owing to relatively small production volumes and high production costs, there is a big group of consumer goods with a high level of retail prices, which has an extremely low share of the turnover tax. For example, in the price of video tape recorders manufactured by enterprises of the Ministry of the Electronics Industry the turnover tax accounts for only 0.16 percent.

It seems that, following the path of expanding the production of goods and services for the public and reducing production costs, it is possible to more uniformly break the mass of the turnover tax down into a large volume of goods and, thereby, to reduce the tax load and even to lower the prices of some goods.

What we have said is far from the full picture of the situation with taxation. Now, when experts in and even cooperatives for the substantiation of the profit taxation system appear in mass, it is simply impossible to pass over one important circumstance in silence.

Perhaps it can be taken as an axiom that economic and business activity is reflected in the profit and income of an enterprise or a cooperative. However, the previous policy of putting all vitally important processes into the hands of the state and long-term, one can say, financial extremism, when a significant share of the profits (revenues) was alienated for so-called general state needs, also led to one present-day dogma. A simplified idea has taken root among managers and, moreover, in public opinion: The smaller this alienated part, the more democratic the management system and the better the conditions for the development of production and scientific and technical progress.

However, real economy and actual economic life do not tolerate one-sided approaches. An optimal share of withdrawal of profit (revenue) into the budget exists objectively. It is very difficult to find it. There is a need for

all-around empirical research on the effect of a specific share of withdrawal of profit into the budget on enterprise activity.

The following theoretical considerations against the theory of a minimal share of withdrawal can be expressed here in advance. First, all cost-accounting organizations should work not only for themselves, but also for society, and carry a financial burden sufficient for a normal development of the entire national economy as a complex. Second, the tax rate cannot be minimal, because then it will not be able to perform the functions of an economic regulator, to make social demands, to realize the conditions of a market equilibrium with respect to the level of management, to force us to commensurate the satisfaction of current and long-term needs, to be concerned about a constant renewal of the technical basis for production, and so forth.

Thus, do our enterprises pay much or little from the profit into the budget? Throughout the national economy 47 percent of the profit enters directly into the state budget (14.0 percent of the GNP) and about 10 percent, into ministry budgets—for ministries and departments. In recent years the share of profit receipts in the budget has decreased significantly (by three to six points) and now enterprises have available 270 billion rubles of economic incentive funds (with due regard for the depreciation fund for renovation and remainders of economic incentive funds).

However, average indicators always sin with a unification of processes and do not disclose the true dialectics and contradictoriness of the country's social and economic development. Therefore, it is useful to dig more deeply, looking into sectors. Here it will turn out that, for example, in light industry the share of the profit centralized in the budget makes up 61.7 percent, in the gas industry, 72.9 percent, and in ferrous metallurgy, 56.1 percent. There is a tough financial burden in heavy machine building, that is, 26.1 percent, in instrument making, 27.2 percent, and in the production of mineral fertilizers, 29.7 percent. Such privileges weaken incentives!

The generalized result of a comparison according to the taxation level is as follows: In the USSR, 13.9 percent, in the United States, 2.2 percent, and in other Western countries (according to 1985 data) it ranges from 5.9 percent in Canada to 1.8 percent in Sweden.

However, we will not hasten to draw a conclusion on the predatory approach of our financial system to the taxation on enterprises. Let us recall that the taxation on physical persons is the basis for the tax system of the United States and Western countries. In other words, one cannot take only the profit taxation rate out of the general system and fail to take into account existing fundamental differences in tax systems.

Deductions for state social insurance represent one important streamlet of the general taxation system.

A self-tax could be a more accurate name of this economic regulator, because, in contrast to other taxes, it is of a purposeful nature, that is, its receipts are intended for pension security and for the payment of various kinds of allowances, the main one being the allowance for compensation for the loss of income in case of disability. The wage fund serves as the basis for computation and insurance rates are set by the state and differentiated according to sectors from 4.4 to 14.0 percent (on the average, 9.4).

Is this much or little? From whatever positions this is analyzed, it can be said firmly: Very little. We modestly put away funds for a rainy day and for our old-age security. Suffice it to say that the insurance rate covers only approximately one-half of the state expenditures on social insurance and more than 30 billion rubles are subsidized from the budget. It is also little, because we ourselves have a very low evaluation of our manpower and understate its value absolutely and relatively with respect to embodied labor, machines, and mechanisms. One of the economic barriers on the path of technical progress and a systematic replacement of manual labor lies precisely in this.

If we take international social security standards, we will see how "economical" we are in relation to the material basis for our health and way of life: the lowest social taxation level out of all other types of taxes and the lowest level in world practice. In our country state social insurance makes up 3.5 percent of the GNP, whereas in the United States, 6.8.

The general taxation level at the level of the U.S. Federal Government makes up 18.7 percent, whereas in the USSR, 33.1 percent.

Our Report: Share of Tax Receipts in 1988 Federal Budget in Percent of U.S. Gross National Product

	Bill. doll.	Percent of GNP
Gross national product	4863.1	
Income tax on the population	393.4	8.1
Corporation profit tax	105.6	2.2
Contributions to social insurance funds	331.5	6.8
Excises	35.3	0.7
Inheritance and gift taxes	7.6	0.1
Customs duties	16.4	0.3
Other receipts	19.4	0.4

What does this indicate? The fact that in our system, one can say, redistribution processes are raging and are on a much larger scale than in capitalist countries.

In our country the profit tax and the turnover tax serve as the main channel of tax receipts, whereas in the United States, it is taxes on physical persons. This difference is connected with the fact that for a long time we have conducted a policy of relatively low wages with a stability of prices of basic food products, as well as rent.

The amplitude of fluctuations in the wages of one occupation and even different occupations was and remains relatively small. This can explain the very modest progression of taxation on the personal income of workers and employees. A 13-percent rate is applied only to income of more than 100 rubles.

And the chief thing—there is not a single country, which would be completely satisfied with its tax system. Therefore, our approach should consist in a synthesis of all the best elements of foreign systems placed on national domestic soil, prerevolutionary experience in Russian financial thought, and the experience of the 1920's.

Now it is possible to draw conclusions on the outlines of our tax system. They boil down to the following:

First, it is important to finally overcome the error on the withering away of taxes in a developed socialist economy and to consolidate in legislation the status of taxes as a single system. This will immediately introduce regulation in existing economic realities and will prevent an arbitrary swelling of this system through the introduction of newer and newer taxes. Relatively equal financial obligations (with respect to profit, revenues, and resources) by enterprises with different forms of ownership will have to be determined clearly.

Second—and this, perhaps, is the most complex task—it is necessary to determine on what principles tax legislation should be built and what types of taxes should be emphasized. Of course, in a crisis situation a variant of inflating taxes from all possible sources suggests itself anyway. After all, this is precisely how finance workers acted during the period of the Civil and the Patriotic War: Emergency revolutionary, war, and other taxes were introduced. All this, however, gave a short-term respite and worked for a maximum of 3 to 5 years. Realizing the whole disputableness of this proposal, nevertheless, I suppose that it is necessary to follow the path of reducing the general tax burden, that is, lowering the relative taxation level. However, here too we must not run into extremes—lower the tax weight, for example, to the level of the United States, or a number of Western countries. The high degree of crisis of the financial and monetary system should be taken into account.

Third, using a fundamentally new philosophy of formation of the state budget, that is, the maximum possible release of its expenditures, which are not of a general state nature and can be financed from internal funds, as early as the next few years it would be possible to reduce the taxation on state enterprises, on the average, to 40 percent of the profit, or 12 percent in relation to the GNP.

The introduction of a single proportional rate under conditions of profound differences in the efficiency of the production basis, which is connected with the historical conditions of its formation, is possible only at a minimal level. The scale of the tax on enterprise income should be constructed according to the "puff-pastry"

principle: Each of its parts has its own specific taste and accordingly, its own rate, which does not violate and generalize the principle of unity and improves the quality of the entire "pastry." Therefore, it is advisable to establish a scale of taxation on the mass of profit with the application of the following taxation rates: 20, 35, and 50 percent (these rates can be refined with due regard for the substantiation of the rates of other taxes). In this case every enterprise in accordance with its mass of profit will have an average-weighted (individual) taxation rate, because higher rates should be applied not to the entire mass of profit, but only to its excess above a certain sum.

For superhigh income it is advisable to apply a higher rate of 55 or 60 percent, which will make it possible to compensate for budget losses due to the application of preferential rates of taxation on the first portions of the profit—for example, up to 200,000 rubles. Such a taxation procedure would create unusually favorable conditions for the activity of small enterprises and resolve our disputes with cooperatives. For medium-size and large enterprises it would be useful in the part of development and mastering of new technologies, when the need for financial backing for high expenditures arises.

Fourth, in our multinational Union of socialist republics the question of a correct combination of the interests of the Union as a whole and of every republic is of fundamental importance. After all, a tax is an alienation and a nonequivalent withdrawal of part of the income. The construction scheme, which takes into consideration the specific features of the Union, should be as follows.

Profit taxation rates are established in accordance with the presented scale. At the same time, uniform and stable quotas (shares) of deductions from their taxes in favor of republic and local budgets are established. The taxation limit is regulated by a scale, not by special rules (the total tax sum should make up no more than 60 percent of the profit) as provided for in the draft of the Law on a Uniform USSR Tax System. Republic taxes on land, labor resources, property, and inheritance are introduced in parallel.

Fifth, to stimulate highly productive labor, it is necessary to introduce a new progressive scale of taxation on physical persons (with a subsequent tax computation on the basis of tax declarations). In our opinion, it is fair to begin increasing the taxation rate from 500 rubles, because it is precisely the share of individuals with such income that, in fact, has a tendency toward growth and, at the same time, such an increase will not affect the bulk of the workers and employees. And, above all, additional tax receipts will make it possible to more rapidly solve the problem of abolishing the tax on individuals with small income (90 to 100 rubles). Furthermore, it is necessary to introduce an additional tax on superincome, first substantiating the level of this superincome and the high rate of this tax—up to 80 percent.

Sixth, it is necessary to work out a procedure of taxation on land, property of physical individuals, and inheritance. This is dictated by the fact that, in order to create a commodity-money equilibrium, it is necessary to intensify the regulation of demand for durable goods, to lower surplus demand, and to create additional financial sources for the implementation of social programs for badly-off strata of the population. In this tax, as in its other forms, moderation is important in order not to chop at the roots of personal financial interest in the population's savings, which are necessary for the purchase of durable goods and creation of the material prerequisites for the continuity of generations.

Seventh, it is necessary to clearly realize that in the next few years the tax on physical persons will not be able to become the main tool of income regulation and to significantly affect the mass of ready cash and its equilibrium with the production of goods and services. Therefore, there is a need for a tax regulation of the total wage fund, which still continues to grow three to four times more rapidly than the national income and the production of key products for the public.

Eighth, it is necessary to persistently follow the path of increasing deductions for social insurance and raising their share in the GNP. In order to strengthen the purposeful nature of these deductions, it is advisable to create a special pension fund, considering it not a particularly monetary fund, but a system of organization of pension security for workers. In particular, this fund, like the Children's Fund imeni V. I. Lenin and other similar funds, should have the opportunities to establish enterprises for the production of goods for pensioners, to invest its funds in insurance and joint-stock companies, and so forth.

Ninth, a reformation of the turnover tax and its closer coordination with the movement of physical production volumes are needed. It is important to use part of the turnover tax funds for an expansion of the production of acutely scarce goods and services. Subsequently, it is necessary to change over to the introduction of an added value tax, which should be coordinated with the transition to the system of national accounts and with an extensive introduction of computers into the accounting system.

Share-Holding Banks Linked to Tighter Credit Policy

904A0065B Moscow PRAVITELSTVENNYY
VESTNIK in Russian No 22, Nov 89 p 8

[Article by I. Levchuk, deputy chairman of the USSR State Bank: "A Boom After a Long Calm"]

[Text] From the time of implementation of the 1930's-1932's credit reform, bank practice, like the theory of banking, served as a subject of discussion by only a small circle of economists. Suddenly, these problems began to interest everyone. Is the emission of ready cash the basic cause of inflation, devaluation of the ruble, and even

deterioration in the people's standard of living? Can a bank refuse the issue of ready cash for paying workers' wages if they are computed and recorded according to family names in departments, but in the enterprise account there is free money to pay them? Industry, trade, and enterprises providing services did not function, in connection with which wages issued 2 weeks ago were not exchanged for goods and were not returned to the bank. It has no ready cash, should new money be issued?

Causes of inflation. Emission, that is, putting money into circulation by a bank to the extent of economic growth—and this should be clearly assimilated right away—cannot be the cause of inflation, even if for the reason that such a technical operation cannot determine complex social and economic phenomena. Deep causes of inflation are rooted in production, in the unproportional development of the production of the means of production and consumer goods, in the insufficient issue of goods and provision of services for the public, and in the imbalance of workers' income and expenditure.

Why has the inflationary "explosion" become possible? As long as a clear division of the entire money turnover into cash and noncash and a firm boundary between them existed and as long as there was a practical impossibility to transform noncash into cash resources, an illusion was created that the money turnover grew only by putting money into circulation, which, if necessary, could be restrained by administrative measures.

Thus, only one channel of putting money into circulation, that is, ready cash emission, was seemingly manifested on the surface. The second channel—credit—that is, the issue of loans, which increases the noncash turnover and remainders of funds in the accounts of bank clients, was veiled. However, as a result of the so-called "credit emission," huge instruments of payment accumulated in it. For approximately three decades the rates of growth of total credit resources were much higher than the growth of the national income. This means that their significant part was "formed" from so-called "imaginary deposits," that is, balance records caused by the issue of bank loans.

In the course of the economic reform one needed only to slightly weaken the restrictions on the conversion of noncash funds kept in current accounts into cash funds and ready cash began to rapidly flow into the first channel. A chain inflationary reaction began.

"The theory of the single pocket." It emerged in the late 1960's and the early 1970's. According to it, the state owns the entire sum of the budget and internal circulating capital of economic sectors, as well as credit. The latter was directly reckoned among budget revenue sources. It was claimed that it was indifferent to the state from where to draw funds. The attempt by a number of economists to uphold the conception of credit as an independent category and to refute this theory was not crowned with success.

The fact that, in order to cover the budget deficit, this theory permitted the transfer of USSR State Bank loans to the USSR Ministry of Finance was the most negative consequence in it. The point is that credit was not and cannot be the source of a budget revenue. A healthy budget is based only on the accumulation of a national income that has already been created and on the withdrawal of part of the accumulations already formed in the economy. If such do not exist, only real loans, which withdraw monetary assets that are actually in circulation, can be justified.

Borrowing, which is accepted in our country—and it was practiced on an especially large scale—is the worst variant of replenishment of the budget. The question “why?” is natural. Yes, because it is connected with putting new instruments of payment into circulation, not with the mobilization of money in circulation. And these instruments of payment, many billions—virtually superfluous for the economic turnover, because they are caused by the budget deficit, not by its needs—constantly wander throughout the accounts of enterprises, organizations, and construction projects. They, along with the population's deferred demand, which, according to estimates by economists, amounts to 50 or 70 billion rubles, form the main mass of noncash and cash funds, which destabilize the consumer goods market.

The negative consequences of direct budget crediting are aggravated by the shortage of credit resources. In the last 2 years credit investments in the economy were reduced by 48 billion rubles. This sum was transferred to the budget to cover its deficit. Science does not know what the limit of withdrawal of credit from the economic turnover is. However, if it is exceeded, the finances of the entire national economy will be disorganized.

Two intermediary conclusions. First, if, in order to balance the budget, we cannot manage without the funds of the economy and the population, we must issue funded loans, which mobilize money from the turnover and do not create new instruments of payment. Second, the funds from the reduction of capital investments cannot be used for any purposes except for paying off budget debts to the bank.

From what to begin? Of course, from the elimination of the budget deficit, ensuring an increase in budget revenues by lowering production and distribution costs in the economy, as well as by constructing state expenditures more efficiently.

Credit improvement is of serious importance. It requires not only the cessation of the issue of loans to the budget, but also a full observance of crediting principles. If the circulation is carried out normally, the entire credit is returned on the date scheduled. At the same time, normal profitability should be attained, because part of the surplus product goes into the payment of interest.

But what is the situation now? Credit investments in the national economy total approximately 400 billion rubles

(300 billion are short-term and 100 billion, long-term). A substantial part of them—about 75 billion rubles—is deferred, which points to a violation of the principles of timeliness and repayability of credit. As a result, the value of credit is not released and noncash instruments of payment remain in the turnover of the economy, but no longer at the enterprises that have received loans.

Deferred, as well as other, credits not connected with material security, that is, for covering the shortage of the normative of internal circulating capital and its increase, for covering the difference in prices of agricultural products, and similar ones (about 40 billion rubles), point to the existence of surplus instruments of payment in circulation.

Next, it is necessary to pay off all credits covering losses and mismanagement issued not against some values, but only against the obligations of enterprises and organizations. This will improve credit relations and will make it possible to develop banking on a healthy basis. How to attain such results? The following is the main path: increase in the profitability of the economy, transformation of all enterprises into profitable ones, inclusion in the economic turnover of the maximum amount out of the 500 billion rubles' worth of commodity stocks, which we have, and acceleration in capital construction and in putting new capacities into operation.

A new step in the activation of bank operation. Specialized banks must be transformed from state into joint-stock ones. After all, at present these banks, feeling the state behind them, do not strive to develop deposit operations and to attract resources from the economy. They expect the state not to leave them without funds.

In the joint-stock form of banking organization, in order to be active and not to ruin oneself, willy-nilly it will be necessary to search for resources and to put them into circulation sensibly, seeking the return of loans.

Another important advantage. The transformation of specialized banks into joint-stock ones can occur only through the sale of their statutory funds and other assets to Soviet enterprises and organizations. State resources, which now form these funds, will be released. But on the other hand, 20 to 25 billion rubles, which form various economic funds, will be invested in banking and put into circulation on a returnable basis.

REGIONAL DEVELOPMENT

Restoration of Production Capacities in ArSSR Slows

904A0059A Yerevan *KOMMUNIST* in Russian
25 Oct 89 p 1

[Armenpress report: “The Republic's State Committee on Statistics Reports”]

[Text] A total of 167 industrial production associations and enterprises out of the 185 that had suffered operated

fully or partially in the earthquake zone on 1 October 1989. It should be noted that the monthly progressive growth of the volume of industrial production in regions that had suffered from the natural calamity as a result of the blockade slowed down sharply. Whereas in January the volume of industrial output at enterprises, which began to operate fully or partially, made up 26.2 percent of the full industrial volume in the calamity zone during the same period of last year, reaching 46.1 percent in January-August, in January-September it dropped to 38.7 percent. Owing to objective circumstances, the overwhelming majority of enterprises in the calamity zone have not yet reached the capacity level existing at them before the earthquake with the exception of the Maralik Electrical Lighting Equipment Plant, at which the volume of industrial production increased by 8.2 percent as compared with the corresponding period of last year, the Kirovakan Grain Combine, by 28.8 percent, the Kirovakan Promavtomatika Scientific Production Association, by 11.7 percent, and others.

Throughout operating production associations and enterprises in the calamity zone contractual obligations for deliveries of products were fulfilled 96.1 percent with debts to consumers in the volume of 30 million rubles, which was 9.6 million rubles more than in January-August, the level of fulfillment of contractual obligations being lowered by 0.8 points. The deterioration in the work of industry in the calamity zone is due to the republic's blockade on the part of Azerbaijan. As a result of the fact that less raw materials and supplies than envisaged were received, there was a disruption in the fulfillment of production programs and obligations to partners.

The process of involving the population in industrial production occurs at unsatisfactory rates. Throughout the industry in the calamity zone the number of industrial production workers during 9 months of 1989 totaled 85,100, which was 21.6 percent, or 23,500 people, less than during the same period of last year. Involvement in production is uneven and the rates of increase in employment have slowed down sharply in the course of the current year. For example, as of 1 January 1989 the average number of workers in the calamity zone was only 30,900. In the first quarter it increased 2.26-fold, reaching 70,000, but then rates slowed down sharply. In the second quarter, as compared with the first, the increase made up only 22.2 percent and in the third quarter, as compared with the second, only 8.2 percent.

Problems with the provision of employment are especially difficult in Amasiyskiy, Artiskiy, Akhuryanskiy, Gugarkskiy, Kalininskiy, Spitakskiy, Stepanavanskiy, and Talinskiy rayons and in the cities of Dilizhan, Leninakan, and Kirovakan.

Thus, a shortage of 25,000 to 30,000 workers in industry is felt in the calamity zone. Their involvement in the

labor process depends primarily on the course of restoration work on putting production capacities into operation.

RESOURCE UTILIZATION SUPPLY

Enterprise Managers Form Association To Overcome Supply Problems

904A0062A Moscow IZVESTIYA in Russian
12 Nov 89 Morning Edition p 2

[Article by M. Krushinskiy: "White Market"]

[Text] I would call it "white" not only in order to stress the difference from the illegal "black," but also, for example, in the sense in which people say a "white book" or a "white dance." A parallel market. Alternative. Born in the depth of the official [market] and entering into a free competition with it, which infringes on no one's interests. The idea itself belongs to a group of economists and managers, who head the recently established Association of Young Managers of USSR Enterprises. When one delves into it, it seems simple, but this simplicity is deceptive. One has to be in an atmosphere of mass shortage to one's heart content in order to get such an idea through suffering.

Imagine that you are a plant director and you need, for example, a crane. You do not have allocation cards and the producer plant will not sell you cranes for the money accumulated in your bank account, because it does not know how to get rid of its own inflationary noncash rubles. Is there no way out? There is, provided that you will also produce something, without which "crane operators" cannot do. Well, let us assume, bricks...

Sometimes people say that in our country trade in the means of production has acquired the nature of an exchange in kind, but this is not quite true. After all, you will not exchange a crane for a brick. Both are sold and bought according to all rules—for rubles. Our special feature lies only in the fact that the customer and the seller carry on trade not on account of rubles and not on account of prices in rubles. Whose scarcity is scarcer?—this is the question, on the answer to which both the volume and the proportion of mutual sales depend. Thus, under our conditions the supply and demand mechanism manifests itself through the "cotton" of artificial prices and devalued money. If it is cleared of "cotton" and equipped with a suitable instrument of payment, there will be a "white market."

"To begin with, we will unite under our roof 200 to 300 enterprises, whose managers form the association," Candidate of Economic Sciences Gennadiy Mikhaylovich Poleshchuk, a member of its council, director of one of the joint enterprises in Moscow, says. "Building materials and some types of metal products, machinery, and equipment—what is scarce today—will become the

object of trade. Subsequently, whoever produces products of interest to us will be able to join us. Apparently, their list will expand."

It should be noted right away that it is a matter of quite large enterprises scattered all over the country—from the Russian nonchernozem zone to the Far East. Nevertheless, the chief thing here lies in the mechanism, not in the scale, of cooperation. Mutual settlements between participants in the market will be made simultaneously along two channels: first, as usual, in rubles at fixed prices; second, in special certificates, which its own clearing and emission center will begin to issue. That is the whole point, because the "certificate" price will be determined exclusively by "white market" conditions: If there is not much of a commodity, the price will be high and if there is much of it, the price will be low. Thus, we obtain a live model of commodity-money relationship in a saturated market, a model given to development.

Some additional details: An indivisible commodity stock is formed as a backing for the certificate. The starting certificate capital of participating enterprises is proportional to the share in kind brought in—a scarce commodity—from bricks to computers (there is a variety of stocks). The clearance and emission center also performs the function of a mediator in trade operations, transferring certificates from some accounts to others. An exchange especially established for this is engaged in the correction of internal prices.

I think that, even if this undertaking "does not go" or "does not go well," theoretical economists will get a distinctive training ground for practical research. However, if it "goes"... I can also imagine a scenario, in which this complicated form of consumer cooperation in the wholesale sphere will encompass the entire national economy and will occupy the dominant position in it. In fact, why should we not assume that, ultimately, the number of enterprises united by the "white market" will run into thousands and later even tens of thousands? After all, this is a tempting opportunity to gain an access to the shortage! For its sake it is worth organizing the

output of something scarce, for which certificates are issued. And what if it will be possible to simply buy them?

This is the question of questions. The moment when the "market" administration, giving up mandatory payments in kind, agrees to sell certificates for rubles, that is, makes them freely convertible—it will be possible to boldly consider this moment a "revolution on a local scale." Essentially, a new currency variety will enter the all-Union securities market. And it will begin to seriously compete with the ruble—at first, in the sphere of wholesale and noncash settlements and later, perhaps, in the consumer sphere as well. In practice this will signify a simultaneous presence in circulation of ordinary and "white" rubles—right up to a complete ousting of either these or others. If the potential of "white market" enterprises proves to be sufficiently strong and if finance workers managing it manifest proper boldness, flexibility, and circumspection, you will see that the small fish will devour the big one, from whose belly it came out! Together with all its shortages, inflation, expenditure prices, departmental monopolism, and a resource rationing system...

Of course, all these are still only dreams, but one would like to believe that they are not totally groundless. According to Poleshchuk, in the middle of November the Council of the Association of Young Managers of USSR enterprises will discuss the establishment of the market as a procedure, not as an idea."

Getting down to earth, in conclusion we will ask ourselves the following question: Will it not turn out that participants in this undertaking, if the course of their business is favorable, will flourish at the expense of nonparticipants? I think that there are no grounds for such apprehensions. A certain redistribution of wealth in favor of producers of scarce products is still an inevitable process if in the future we also intend to reduce state orders and to expand the share of goods directly entering wholesale trade. The "white market" will only introduce all this into an organized framework. After all, as a rule, what is more needed is scarce. An additional market incentive for the production of such products will only be to the consumer's benefit.

AGRO-ECONOMICS, POLICY, ORGANIZATION

Further Discussions of Land Law, Ownership

Yemelyanov at Supreme Soviet

904B0033A Moscow SELSKAYA ZHIZN in Russian
28 Oct 89 p 2

[Article by T. Boykova, parliamentary correspondent of SELSKAYA ZHIZN: "We Have the Right To Own Land"]

[Text] Among the draft laws, on which USSR people's deputies are working now, there is not a single one that could be put in the last place. All are important. However, judging by the degree of the heat of passions around the draft of the Land Law, it still stands apart.

The most active work on putting the finishing touches on this draft has been carried out at the Committee for Agrarian Problems and Food of the USSR Supreme Soviet during the last 3 days—24, 25, and 26 October. Having begun from several alternative versions, deputies have finally arrived at one—the latest—version, which after careful and all-around finishing work is ready to be submitted to the USSR Supreme Soviet for discussion.

USSR people's deputy A. M. Yemelyanov, deputy chairman of the agro-committee, comments on some results of the collective work at this stage:

"The following provision is fundamentally important in this document: Land should be national property and be owned by the people. I stress, it should be national, not Union-republic, property (after long debates the committee did not accept this provision contained in the government version of the draft). In turn, it is realized through individual labor property (for example, peasant farms), collective property (kolkhozes and sovkhozes), and state property (some special projects, reservations, and so forth). The fact that land is to be transferred for ownership, not for use, is also a fundamental factor.

"The next provision, which is very clearly stipulated by deputies, lies in the fact that the rural soviet—precisely it, not the oblast or rayon soviet—is the main link, which grants land to those that use it, that is, kolkhozes, sovkhozes, and peasant farms, for ownership or, in practice, for possession. There were many disputes concerning this matter. Nevertheless, such a version was arrived at. Consequently, according to our draft, deputies of the rural soviet will decide everything that concerns land, but will take the opinion of kolkhoz and sovkhoz management into account. This was done in order to observe the interests of both the collective and the individual. The entire logic of our joint arguments was built on seeing to it that we proceed from the interests of the person who works and lives on land. At the same time, however, the draft does not deny the

decisions of other state bodies concerning land in cases when neither rural nor rayon soviets are able to solve the problem."

Here is the opinion of USSR people's deputy I. M. Ivchenko, link leader on the Oktyabr Kolkhoz in Chertkovskiy Rayon, Rostov Oblast:

"In my opinion, the guarantee that a working person will receive a piece of land is the chief thing in the draft of the Land Law. The control mechanism inherent in it—if one is lazy, uses land inefficiently, or destroys it, the rural soviet will have the right to withdraw it—is a very important factor. I would also like to note the principles of land possession and the proposed mechanism of leaving a kolkhoz stipulated by the draft. I personally do not intend to leave the kolkhoz. But there are many people who would like to try to manage farms independently. Many people have already addressed such a question to me as a deputy. I tell everyone the same: 'Wait a little, we will adopt the Land Law, and such an opportunity will appear.'"

Here is another point of view—that of A. S. Buichitskiy, USSR people's deputy, chairman of the Druzhba Kolkhoz in Novomoskovskiy Rayon, Dnepropetrovsk Oblast:

"I see the value of the prepared draft of the Land Law in the fact that it affirms the diversity of forms of farm management. I am categorically against counterposing one thing to another; for example, leasing to kolkhozes. If things turn out well for some lessee, well, thank God. However, to extol leasing alone, declaring that only a lessee or, for example, an individual peasant farm will be able to feed the country, means to make a big economic and political mistake.

"Today one can do little alone. For example, let us take roads, or the installation of gas facilities—this requires enormous sums of money. Can anyone permit himself such expenditures? No. And what about equipment? Small-size equipment is not and will not be available in the very near future. One will have to ask the kolkhoz for it. The kolkhoz will give it, but only after it finishes its own work. Consequently, the lessee will incur losses. Moreover, he is forced to make almost everything manually. The most difficult, unproductive, and exhausting labor is on his shoulders. This in no way can be dismissed.

"And another thing: Does every person who leases land have the necessary knowledge? Does he know how much fertilizer, which, and when to apply? Does he know how to control pests and diseases? In brief, is there a guarantee that he will not destroy land and that he has the moral right to possess it? There is no answer to this question. And another question arises: Who then will feed the country? I will answer: first of all, the kolkhoz member. For example, on our farm, where normal living and working conditions have been established for 500 kolkhoz members, one machine operator supplies grain for approximately 300 people, one livestock breeder

supplies meat (if we consider 60 kg per person) for 35 people, and one milkmaid supplies milk for almost 200 people. Here is the simplest and most graphic argument in favor of the kolkhoz. It is a giant, but it is still knocked down to the ground and its hands and feet are tied tightly. Today I see the task in freeing and helping it to get on its feet. In my opinion, the draft of the Land Law will promote this, at the same time, not encroaching upon the rights of the individual worker.

Bronshiteyn Commentary

904B0033B Moscow *EKONOMICHESKAYA GAZETA*
in Russian No 43, Oct 89 p 8

[Article by USSR people deputy M. Bronshiteyn, head of a department at Tartu University: "Land Is National Property"]

[Text] In the Land Law, whose draft is now being discussed at the USSR Supreme Soviet, it is important to take into consideration the exceptional features of land as a natural resource. Land is the main means of production for agriculture, possessing unique properties. It is not only a matter of the insufficiency of land, but also of the specific nature of its reproduction. Whereas all the other material wealth is destroyed during its use, land, when handled correctly, restores, as well as accumulates, its fertility. Land is special wealth and it should be valued. A regime and economic and technological conditions of use, which would increase its life-giving properties and hinder its irresponsible application, should be created.

Therefore, the priority of agricultural land use acquires the greatest importance. It must be not only confirmed legislatively, but also ensured by means of economic levers. The withdrawal of land from agricultural turnover should be limited through a sharp increase in the payment for land—two- or even threefold. The question of substantiating the rates of these payments arises here. Everywhere it is necessary to make an economic evaluation of land as the agricultural means of production. A land cadastre is necessary, but it characterizes only the natural properties of land. For example, land plots of the same quality near and far from a city are evaluated differently, like plots in inhabited or newly developed regions. An economic evaluation points to the capacity of land to bring income. For example, better-quality land located near convenient transport arteries brings an additional income and rent.

It is quite complicated to make a correct economic evaluation of land under conditions when it is not sold. In my opinion, this problem should be solved within the framework of individual regions, where it is possible to encompass the entire diversity of economic conditions and all the spheres of activity requiring land plots. In my opinion, taking into consideration the increased insufficiency of land resources, a payment should also be collected from inferior land. True, the economic regime of land use during the present transitional period, when only new production relations are formed in agricultural

production, should also be special and transitional with a minimization of the payment by agricultural land users.

Different opinions are expressed about who is the subject of land possession—a kolkhoz, a sovkhoz, or the peasants who work on them. In my opinion, peasants. Does the need for an immediate "black partition" of kolkhoz and sovkhoz land follow from this acknowledgment? Such extreme measures are hardly necessary. In my opinion, however, peasants should have firm legislative guarantees of their rights to land possession.

The possibility of terminating the possession of land if it is not used, or is used inefficiently and in detriment to its fertility, which is provided for by the draft law, is of fundamental importance. Land is our most valuable national property and the basis for society's entire vital activity. Therefore, we cannot allow land possession to be considered only the most profitable investment of private capital. Land use should meet private, as well as public, interests.

The draft law recognizes Union-republic ownership of land. However, it seems to me that it is more correct to speak of land as national property, which is at the complete disposal of republics. Union management bodies cannot ensure an efficient use and protection of land resources in localities. The Union's interests can be represented on the basis of contractual relations and the introduction of paid land use. For example, I believe that even the USSR Ministry of Defense should have in its budget an item—payment for used land. If it takes better and bigger plots of land, expenditures increase. Conversely, if it optimizes land use, funds for social and other needs of the armed forces will be saved. Republics and regions with relatively better natural resources can and should transfer part of the land and mine rent for all-Union needs. Thereby, we will create an economic mechanism of coordination of interests and will ensure a more efficient use of natural resources.

Specialists on Leasing Progress, Problems

Impediments Still Hinder Lessees

904B0036A Moscow *SOVETSKAYA ROSSIYA* in
Russian 6 Sep 89 Second Edition p 1

[Article by M. Shevlovkov, head of a department at the Central Scientific Research Laboratory under the RSFSR State Committee for Labor: "'Traps' for Leasing"]

[Text] For 4 years we have been talking about leasing, but somehow we do not see a surplus of agricultural products. An impression is created that very capable bureaucrats knowledgeable in their field oppose the introduction of leasing. They twist things so that an impression may be created that this method is ineffective and so that, in the end, people may give up independent work. Unintentionally, one begins to think: Perhaps we really pin very big hopes on leasing? (A. Prikazchikov, Kaluga Oblast)

Unfortunately, the question raised by the reader is characteristic of the present editorial mail. Doubts about the effectiveness of leasing exist, although life again and again confirms: It really opens the shortest way to food sufficiency. Conviction of this was also reflected in the appeal to the Congress on the part of 417 USSR people's deputies, who spoke in defense of peasants' interests. They stated openly: "We will not accept the slogan on the disbandment of kolkhozes, just as on the restraint of the leasing movement."

For myself I will say: It is criminal to restrain it. I recall a trip to the Chegem Kolkhoz in the Kabardino-Balkar ASSR. Previously, people there had only read about such a phenomenon as overproduction, but suddenly it seemed that a horn of plenty was discovered: The plan for the sale of corn seeds was fulfilled and ears from hybrid plots were coming and coming. But they found no market. They were placed in storage piles. Later, when procurement officials helped and the local agroprom joined in, it was possible to find customers.

Leasing links, which right away raised labor productivity sharply, became the "culprits" of seed corn overproduction. For example, in the field cropping link of Azretal Alakayev people remained the same, machinery was not added, and the load grew from 290 to 380 hectares. As a result, as compared with the preceding year, the output of hybrid corn increased from 34 to 48 quintals, of wheat, from 30 to 43, and of sunflower seeds, by one-third.

This is not an isolated case. Statistics shows that throughout the country in leasing collectives the yield of grain crops is 10 to 15 percent higher than the usual and the annual increase in milk yields per cow reaches 500 to 1,000 kg. With the introduction of leasing relations in Orel Oblast labor productivity in the agrosektor has almost doubled. Why then have only one-third of Russia's farms applied leasing so far?

Essentially separate leasing foci "rot" on Russia's agrarian map. In the Komi ASSR, in Kabardino-Balkaria, and in Gorkiy, Kemerovo, Amur, and Sakhalin oblasts a little more than 10 percent of the farms have adopted leasing. The situation is not better in Leningrad, Bryansk, Kalinin, Rostov, and Astrakhan oblasts...

As is well known, there are many reasons for this. They include overcautiousness (not to do something very stupid), which is familiar to all of us, a lack of understanding of the leasing mechanism of management, inability and, hence, reluctance to embark on a path that has just been beaten, and unwillingness to complicate one's life. Of course, there are managers who will not accept leasing in principle, seeing in it a direct threat to the very existence of their administrative essence. Recently, this category of managers has more and more often cited the following argument to counterbalance leasing: Why leasing if kolkhozes and sovkhoses, even in

their present form, have by no means exhausted their potentialities? The example of the best ones demonstrates this

On the whole, the argument is absolutely correct. It seems that, in fact, kolkhozes and sovkhoses have by no means exhausted their potentialities. However, these potentialities lie precisely in their liberation, in the development of leasing and cooperative forms within the economy, and, in general, in the diversity of forms of further development. To counterpose strong farms to leasing is a very vulnerable argument even if for the reason that, unfortunately, we have very few highly efficient farms: They are an exception rather than the rule.

When one becomes familiar with highly organized labor collectives, very often one discovers that their achievements are ensured not by the administrative-order system, but despite it, owing to the fact that economic methods of management are applied to one degree or another. The Stavropol Kazminskiy Kolkhoz, whose chairman is Aleksandr Alekseyevich Shumskiy, is a brilliant example of this. It is many years since, contrary to all instructions, it has changed over to remuneration based on gross income and according to the final result. This contributes to a constant and steady increase in production and helps to attain high profitability.

In brief, sabotaging leasing, these pseudozealots of kolkhozes and sovkhoses, we repeat, are simply afraid to lose the command heights to which they are used, do not want to give power to the people, and realize that this will deprive them of many present privileges and force them to change the very nature of activity: Advice and consultation should replace regulation and command and relations of subordination should become a thing of the past. On leasing farms lessees hire specialists and managers and also determine the amounts of the administrators' earnings, including on kolkhozes and sovkhoses, which restructure their work on a cooperative basis and use leasing intrafarm relations.

Of course, those who secretly resist the new never admit this. However, their true frames of mind, nevertheless, are revealed easily and simply. They are felt in numerous restrictions, kinds of "traps" for leasing, by means of which managers and specialists, who remain captives of old concepts and ideas, try to hold out at command heights.

What kinds of traps are these? We will begin from the fact that very often contracts are concluded for 1 or 2 years. This undermines faith in stability and steadiness and does not create interest in carrying out work designed for a long-term, not short-term, effect. For example, the wings of lessees on the Vpered Kolkhoz and on the Znamya Truda Kolkhoz in Gus-Khrustalny Rayon, Vladimir Oblast, were clipped by such a method—essentially, land was given to them for one season. It is clear that machine operators will not be concerned about increasing land fertility here.

Lessees' independence is curtailed and also restricted by a large number of other methods. On the Kolkhoz imeni Lenin in Lyuberetskiy Rayon, Moscow Oblast, the administration has seemingly concluded a contract for 5 years, but it annually revises volume assignments by the method "on the basis of what has been attained." It is obvious that there will be no active striving for a constant expansion of production here and, in essence, a limit in development is placed on it.

Inveterate fear, which comes from the past, of high income for workers and kolkhoz members still lives in our kolkhoz and sovkhos offices. On the Nizhnervartovskiy Sovkhoz in Lukhovitskiy Rayon, Moscow Oblast, a wage ceiling—no more than 300 rubles—was established for livestock breeding lessees. Why? The explanation is usually the following: We are afraid of inflation and a wage increase should not outstrip labor productivity growth. True, it should not. Then draw up the contract so that every ruble of wages may ensure without fail output for a bigger sum and a bigger profit. Then a disproportion between the mass of commodities and the sum of payments will become impossible and, at the same time, it will be profitable for a worker and a kolkhoz member to increase output.

Elementary injustice is also encountered often: Lessees are deliberately doomed to destruction and bankruptcy. For example, on the Druzhba Sovkhoz in Yaroslavl Oblast the farm withdraws 60 kopecks per ruble of gross income in its favor from lessees S. Lepshin and E. Temirsultanov, whereas only 14 kopecks, from all the rest. Sometimes one is amazed when one sees by what methods those that try to break away from under administrative tutelage are oppressed. Even on the Chegem Kolkhoz, where leasing has proved its worth brilliantly and it would seem that the most favored nation treatment should be ensured for it, machine operators are also pushed around. They complain: "We could work even better, but the administration does not enable us to develop fully. It does not permit us to dispose even of part of the above-plan output. A system of fines for idle machinery has been introduced. For what are we punished? We pay rent and it is clearer to us whether a machine should stand idle or operate." Lessees decided that, if in the future contract everything was as before, they would not sign it.

Lessees are in an extremely complex situation where the status of and system of remuneration for office specialists remain as before. In this case kolkhoz and sovkhos services often avoid servicing subdivisions, which have acquired independence, saying: You are your own masters, then get out of your troubles on your own.

To what does all this lead? Many people go into leasing reluctantly and cautiously and are afraid to assume responsibility and to take a risk, because they do not expect a friendly attitude toward them and do not count on active help. There are also cases of dissolution of leasing contracts. They are noted, in particular, in Novosibirsk, Rostov, and Tyumen oblasts. Seven leasing

links broke up in Plyusskiy Rayon, Pskov Oblast, alone. This is very bad. It is extremely complicated to begin anew where leasing has already suffered failures. It is very difficult to revive disappointed hopes.

The main conclusion, which follows from everything that has been said, is that it is best if leasing relations are mastered right away by the entire farm. From the first day it is necessary to ensure maximum democratization and to break the administrative-order system.

It seems that here the main hope rests with rural party members. The decisions of the March Plenum of the CPSU openly obligate them to this. Experience and life itself show: Where party committees, as, for example, in Orel Oblast, boldly meet the new halfway, it is incomparably easier to overcome the barriers of stagnation and inertness.

Administration Head Replies

904B0036B Moscow SOVETSKAYA ROSSIYA in
Russian 18 Oct 89 Second Edition p 3

[Article by Candidate of Economic Sciences V. Nefedov, chief of the Statistical Administration of the Agro-Industrial Complex of the RSFSR State Committee on Statistics: "In the Vise of the 'Coverage'"]

[Text] Statistics, if its data were not falsified, at all times made it possible to judge the true state of society. This is also the case now. Statistical data help us to more or less clearly separate the wishful from the actual and this is very important. Previously, we very often permitted ourselves to see only what we wanted. This can no longer be allowed.

This year we have conducted a number of surveys, which help us to get a definite idea of how the transition to leasing is being carried out on kolkhozes and sovkhos. It is well known that these changes are of a radical nature. In essence, basic property relations are being restructured and the alienation of property from a specific producer of material wealth is being overcome—from state property it is being transformed into truly national property.

Let us turn to specific figures. If we take purely quantitative characteristics, there is growth and, seemingly, considerable at that. On kolkhozes and sovkhos in the Russian Federation today there are about 115,000 leasing subdivisions—two-thirds more than there were according to the data on 1 December 1988. Approximately 1,300,000 people, that is, about 15 percent of the average annual number of sovkhos and kolkhoz workers, are employed on them. One-third of the entire arable land and up to 30 percent of the public livestock population are assigned to them.

This is on the average. The new is most boldly being mastered in Orel and Belgorod oblasts and the Kalmyk ASSR. As a minimum, one-half of the livestock and arable land has been transferred to lessees here. At the same time, in Ryazan, Chelyabinsk, Kemerovo, Amur,

and Sakhalin oblasts this indicator is below 10 percent. There are also farms, which do not even try to experiment and do not adopt leasing at all. There are more than 9,400 such farms in the Russian Federation.

As you see, new economic relations have become quite widespread only in individual regions. In general, however, the administrative-order system does not surrender its positions even if we judge by the "coverage," which, as we will become convinced soon, does not paint the whole picture. In order to get a complete and clear idea of leasing, first of all, it is necessary to determine the measure of its effectiveness. What does it give to production and to people and how does it help to solve food problems?

I will say right away: Farms, where all the subdivisions have adopted leasing, attain the best results. For example, on the Kommunizm Kolkhoz in Aktanyshkiy Rayon, the Tatar ASSR, all arable land and livestock have been assigned to lessees. As a result, in 1988, as compared with 1987, meat production increased by one-fourth and profit reached 500,000 rubles, as compared with 100,000 rubles of losses in 1987.

If we take average results, not the highest achievements, as investigations by sampling showed, the labor productivity of lessees, as compared with those who worked according to old methods, was 12 percent higher. With less manpower they cultivate more arable land and handle a big livestock population. Leasing thoroughly squeezes out mismanagement and there are fewer violations in production technology.

With everything that has been said, no matter how paradoxical it may seem, thus far it has not been possible to obtain the expected increase in the production of food products from leasing. Last year lessees had one-fourth of all the grain crops, all arable land, and up to 25 percent of the livestock, but they gave only 15 percent of the gross agricultural output, including 23 percent of the grain, 14 percent of the potatoes and milk, and up to 18 percent of the meat. This is obviously insufficient. Why? Perhaps we have exaggerated the possibilities of leasing?

We will begin from the fact that the zone of spread of new economic relations, actually, is much smaller than our statistical reports indicate. For example, there are less than 1,200 farms, which have fully adopted leasing. From where are the relatively satisfactory average data?

Unfortunately, history with the contract, which, essentially, has been ruined by formalism and show, is repeated to some extent. Here and there a noisy campaign is substituted for thoughtful and highly skilled work, without which the new cannot be mastered. In the chase after the percent of the "coverage" leasing is ordered from above. In the end everything often boils down to the fact that on farms the contract, which is not especially effective, is given the new fashionable name "leasing" and, essentially, nothing changes. As a result, in 1988 in leasing subdivisions of 14 oblasts, krais, and autonomous republics the yield of grain crops was, as a

minimum, 20 percent lower than throughout kolkhozes and sovkhozes. In essence, this is the direct result of report padding. It is obvious that in these regions people introduce leasing only "on paper" and then they themselves lament hypocritically: "You see, it does not give results." Essentially, show becomes one of the methods of fighting against leasing.

Where leasing, nevertheless, is mastered in one form or another, it very often cannot manifest all its advantages. The point is that, as a rule, leasing subdivisions remain completely at the mercy of kolkhoz and sovkhoz offices, which very reluctantly give up the methods of management to which they are used.

The survey, which we conducted in a number of oblasts in Russia, showed that 73 percent of the lessees, that is, almost three quarters, strove primarily for greater independence and wanted to become complete masters of the results of their labor and implements of labor. Only 27 percent of those questioned had primarily the desire to increase personal earnings. Meanwhile, administrators do not want to give independence to any, so to speak, subordinates. According to our data, in 19 percent of the leasing subdivisions surveyed by us the administration bluntly interfered in their production activity and in 10 percent, diverted lessees to jobs not stipulated by the contract.

Despite the opposition of the adherents of the directive management system, the Ukase on Leasing raised its popularity significantly. Immediately after it had gone into effect most contracts were concluded for 5 years, not for 1 year. Soon, however, it was discovered that, as before, lessees were not given the right, as stipulated by the ukase, to independently determine the directions in their production activity and to dispose of the products produced by them. Their absolute majority, as before, delivered everything that they produced to kolkhozes and sovkhozes. Only 1 percent of the leasing collectives also used other sales channels—the market, cooperatives, and stores. As a result, not many people intended to extend contracts in the future and 2 percent of the participants in the survey stated that they would like to dissolve them ahead of schedule.

What is the way out? Two-thirds of those who answered our questionnaires considered it necessary to urgently adopt a leasing law, which would protect lessees against an illegal administrative dictate.

In the course of the survey almost all those whom we addressed spoke of the need to sharply raise the degree of technical equipment of agriculture. They stressed the following: First and foremost the lack of the necessary set of working machines and implements prevents the squeezing out of manual labor. There are vast disproportions here. Last year kolkhozes and sovkhozes in the Russian Federation had trailed implements, that is, plows, harrows, cultivators, and so forth, worth only 162 rubles per 100 rubles' worth of power machinery, primarily tractors. According to calculations, they should have

trailed implements worth 260 to 300 rubles. Now it is even worth reducing temporarily the rates of increase in the output of draft machinery with a view to providing the machinery that is already available with everything that is necessary and, thus, putting it into operation 100 percent.

As leasing relations develop, the demand for small-size machinery grows rapidly, but, owing to the passion for monster mania, we greatly lag behind many countries. In 1987 the United States produced 8-fold more small-capacity orchard and garden tractors and motor cultivators than the Soviet Union, Japan, 4-fold, and China, 12-fold. Furthermore, in the United States minitractors are supplied with an incomparably bigger number of implements and the sphere of their application is unusually wide. In our country some shifts have appeared, but fundamental changes for the better are not expected this year. Perhaps then it makes sense to buy this kind of machinery abroad? And not only in a centralized manner. Kolkhozes and sovkhozes, which receive currency for an additional sale of grain, could also do this directly.

This is how leasing is now seen in the mirror of statistics. Judging by everything, we have nothing to be happy about as yet.

Private Farming Featured at VDNKh, Problems Cited

904B0021A Moscow VESTNIK AGROPROMA in Russian No 42, 13 Oct 89 pp 1-2

[Article by N. Aliyeva, special correspondent of VESTNIK AGROPROMA: "Possibilities of Private Homesteads"]

[Text] Large potatoes with a thin brownish skin, uniform carrots and sugar beets without any damage, different varieties of apples, watermelons, and melons, and finally, all kinds of canned fruits, berries, and vegetables... It is impossible to enumerate all this! From where is this splendor?

This time people engaged in animal husbandry and plant growing during time free from their main jobs, not kolkhozes, sovkhozes, or experimental farms of scientific institutions, exhibit the fruits of their labor at the Vegetable and Potato Growing Pavilion of the Exhibition of USSR National Economic Achievements. These are owners of private subsidiary farms and members of various orchard, garden, and animal husbandry cooperatives and partnerships. They include indigenous rural residents and city dwellers, in whom man's age-old yearning for land and nature has been awakened. Many, if not the majority, are engaged in agricultural labor, pursuing a fully understandable goal: To provide their families with various food products and, if it comes about, to sell something, thereby bringing an additional kopeck home.

The exposition, about which our story is, is called "Development of Citizens' Private Subsidiary Farms and of Collective Horticulture and Gardening Is a Potential for Increasing the Production of Food Products." This exhibition will continue until 31 December 1989.

The introductory section convinces visitors that private subsidiary farms and orchard and garden plots represent an integral part of socialist agricultural production and a significant potential for replenishing the resources of food products. Suffice it to say that today more than 50 million families are engaged in livestock and poultry raising and in potato, fruit, and vegetable growing on private farms and orchard and garden plots. Private farms produce one-fourth of the gross agricultural output in the country, including 30 percent of the livestock products and almost 20 percent of the plant products.

At the beginning of this year they had 23.8 million head of cattle, including 13 million cows, 14.5 million hogs, and 34.7 million sheep and goats.

The output of collective horticulture and gardening has become a substantial addition to workers' and employees' tables. More than 30 million people have been given the opportunity to engage in a useful endeavor, to join in work on land, and to spend their free time efficiently. Many of those who have orchard and garden plots are provided with potatoes, vegetables, fruits, and berries to a greater extent. The stands of this exhibition tell about this.

They acquaint visitors with the situation in this respect in all the Union republics as exemplified by individual oblasts, rayons, kolkhozes, and sovkhozes, where work on the development of private subsidiary farms, as well as specific better private farms, cooperatives, and partnerships, is well organized.

How were the participants in the exhibition determined? Winners in the all-Union review-contest for the best private subsidiary farm and the best orchard and garden plot held last year became its participants. This review-contest, like the present exposition at the VDNKh, which became its logical conclusion, had as its goal an extensive popularization of advanced experience in the development of private subsidiary farms and orchard and garden plots, as well as an analysis of the causes hindering this process.

Truly wide experience has been accumulated. For example, here is an exposition devoted to the private subsidiary farm of the Gusev family from the Ferzikovskiy Sovkhoz in Kaluga Oblast. On their private plot of one-fourth of a hectare they keep 9 cows, 10 hogs, and 50 chickens. The family has in its private use T-25 and DT-20 tractors, a single-axle trailer, a horse rake reequipped for tractor traction, and a milking apparatus. Last year the Gusev family (mother, father, and three adult sons) sold 16 tons of milk and 2 tons of meat. This year the family members intend to sell 20 tons of milk and 3 tons of meat.

Here is an example of successful work by V. V. Ryabkov, a member of the Amurskiy Orchard Partnership located in Omsk Oblast. Last year he gathered 750 grams of fruits and berries and 3.8 kg of vegetables per square meter on his plot.

Going from stand to stand, one becomes convinced that private farms and orchard and garden plots are capable of giving an appreciable increase in agricultural output. It is only necessary to help and support their owners. Where managers and specialists of kolkhozes and sovkhozes, local soviets of people's deputies, and representatives of procurement and other interested organizations undertake this, the supply of food products for the population improves.

The organizers of and participants in the exhibition discussed this at a meeting with press and mass information media workers.

Mikhail Fedorovich Lozhkin, chief of a group of subsidiary farms in the Omsk Oblast Agro-Industrial Committee, said that purposeful work on the development of private subsidiary farms was being carried out in the oblast for many years.

"Labor on a private farm is difficult. This, in fact, is a second shift. That is why attention to, concern for, and help to owners are so necessary. We have accumulated some experience in this. Food commissions headed by chairmen of executive committees of soviets of people's deputies are annually established at oblast and rayon levels. The object of these commissions' work, while fulfilling the developed programs for providing help to private subsidiary farms, is to contribute to an improvement in the oblast's provision with livestock and plant products."

It is interesting that literally every family that does not keep domestic animals and the reasons for this are known in the oblast. An attempt is made to help in the construction of livestock barns and in the purchase of young stock and feed and, finally, great concern for the organization of livestock and poultry purchases is shown. So-called user farms, which provide private subsidiary farms with young hogs, have been established on the oblast's specialized hog breeding farms. Now 130 young hogs per 100 private subsidiary farms are sold and the goal set is to sell 2 per farm. The Oblast Union of Consumer Cooperatives buys meat from owners. Last year it procured almost 24,000 tons. It should be noted that all this meat is used for intraoblast consumption. At every rural soviet the Oblast Union of Consumer Cooperatives keeps its procurement official. When there is a mass purchase, a transport column for the shipment of livestock is formed in rayons. It moves according to schedule from one farm to another. People know when and where to drive animals.

Sverdlovsk Oblast has also placed emphasis on the development of animal husbandry. However, it has its own characteristic features. Sergey Nikolayevich

Maletskikh, chairman of the Oblast Union of Cooperative Animal Husbandry Workers, talked about them at the meeting:

"Many large enterprises are located on our oblast's territory. City dwellers make up 90 percent of the residents. At one time people willingly kept cows, hogs, and poultry in workers' settlements. In order to manage the farm more successfully, they united into partnerships. Gradually, however, owing to the incorrect attitude toward them, partnerships almost disappeared and with rare exception residents of settlements refused to keep livestock. In 1987 after the issue of the well-known decree of the CPSU Central Committee and the USSR Council of Ministers on the further development of collective horticulture and gardening the attitude toward private owners began to change fundamentally. The experience of former partnerships was grasped like a straw and on their basis cooperatives of amateur livestock breeders were established and, subsequently, unified into an oblast union. It now has 27,000 members. Cooperative workers keep approximately 13,000 cows, 25,000 hogs, and as many sheep, goats, and other livestock. Last year private farms produced about 57,000 tons of milk and 7,000 tons of meat."

Yes, this is a substantial contribution to an improvement in provision for the oblast's residents. Cooperative workers try to increase the production of domestic farms. Uniting into cooperatives, owners of private farms have been given the opportunity to provide themselves with everything that is necessary for the management of animal husbandry and plant growing. Cooperatives form part of the Oblast Agro-Industrial Committee and hayfields, pastures, and arable land have been allocated to them. Cooperative workers have acquired machinery. Now cooperatives provide 16 types of different services to owners of private subsidiary farms and their cost is lower than that at state organizations. For example, the rental of a machine for carting hay to a transport agency will cost the owner of a private farm twice as much as in a cooperative.

Cooperation principles become increasingly widespread among owners of private subsidiary farms. Together it is easier to ensure the supply and sale of products and, finally, to simply organize work on the care of livestock and gardens. A cooperative for milk and meat production operates near the Shukhobodskiy Sovkhoz in Vologda Oblast. Mikhail Borisovich Kostrov, its representative, said that the cooperative was born not by chance.

"At one time people from so-called unpromising villages were settled in the central farmstead and were given housing in five-story houses. Naturally, such urban housing without outbuildings completely broke people of the habit of managing private farms. Nevertheless, there were interested people even among youth. When the bans on the production of products in a private homestead were removed and leasing relations began to be applied more widely, we decided to take a written off

farm on the sovkhoz and to keep private cows there. Thirty-nine interested people were recruited. We hired a milkmaid so that the main operation—milking—might be performed by a professional and entrusted all the remaining operations on the farm—feed procurement, care of livestock, feeding, and barn cleaning—to cooperative members."

In contrast to this farm, on the Kolkhoz imeni Dzerzhinskiy in Volyn Oblast the houses are primarily of the farmstead type. However, even here there was a period when the livestock population in private homesteads began to decrease. This is understandable: The village was growing old and young people did not always want to spend their free time on the care of animals, especially as there were many difficulties with feed and grazing. Some incentive was necessary.

From the story by kolkhoz chairman Pyetr Makarovich Rudak it became clear that in that case the incentive could be identified with well-organized, real help to private homesteads. To begin with, a new post—that of deputy kolkhoz chairman for the development of private subsidiary farms and cottage industries—was introduced on the farm. He formed an aktiv, which included deputies of the rural soviet and farm specialists.

Now the kolkhoz has undertaken all the help to private farms. Elderly people do not have to look for an "illegal" worker to haul feed and to till gardens. Kolkhoz machine operators will do all this for a very moderate pay made in the cashier's office. There is a plan to organize a cooperative, which would organize services for owners of private farms.

However, even now matters have been organized so that many problems concerning the purchase of feed and sale of fattened animals have disappeared. The board has concluded a mutually beneficial contract for raising livestock and poultry with every owner of a private farm. The contract interests people financially. For example, according to it for 1 quintal of delivered meat 1 quintal of concentrated feed is due and 10 kg of concentrated feed can be obtained for 100 kg of milk sold to the farm. In addition, a bonus is due for the sale of fattened young cattle. In 1988 every private farm obtained an average of 1,136 rubles of profit.

Orchard and garden plots also give many products. They are basically vegetables, berries, and apples. The Svyazist Orchard and Garden Partnership in Zagorskiy Rayon, Moscow Oblast, the orchard and garden partnership of the Gorkiy Motor Vehicle Plant, and others operate successfully. The exhibits at the exposition tell about them.

However, not everything is as smooth as it seems when one looks at the rich fruits of labor of people who only recently have been scornfully called "private traders." In general, such an attitude toward true workers still persists here and there. For example, people in Sverdlovsk Oblast have a hard time with the sale and slaughter of animals. An instruction prohibiting the slaughter of

livestock in settlements has appeared from somewhere. Cooperative workers from the Shukhobodskiy Sovkhoz in Vologda Oblast believe that the relations with the State Bank department are by no means partnership relations. Bank workers look askance at cooperative workers, not taking into account that in this case they are the same peasants.

Almost all owners of private subsidiary farms and orchard and garden plots complain about the lack of small-scale mechanization equipment and of the simplest devices for the processing of agricultural products and about the lack of enterprise on the part of procurement organizations, through the fault of which not a small part of the harvest perishes. How localistic frames of mind hamper this endeavor! The same Svyazist in Zagorskiy Rayon established relations with a peat quarry in Vladimir Oblast. Well, what of that? The authorities in Vladimir Oblast decided that "their" peat should not be given to another oblast. There are many similar examples. The Gusev family, to which the exhibition devotes a whole stand and which feeds products produced during time free from its main job to more than one dozen people, cannot solve problems with the construction of outbuildings. For now local authorities only promise help.

True, such facts have seemingly remained behind the exhibition's stands. However, the visitor's attentive and not indifferent glance will determine them.

RSFSR Deputy Chairman Calls for Better Supply, Support

*904B0047A Sverdlovsk URALSKIYE NIVY in Russian
No 10, Oct 89 pp 46-48*

[Article by V. Belchenko, deputy chairman of the RSFSR Gosagroprom: "Meeting Consumers' Needs More Completely"]

[Text] The principal feature of perestroika in material and technical support is the transition from funded supply to wholesale trade in industrial engineering output. Wholesale trade was organized long ago in the RSFSR Gosagroprom. It was begun considerably earlier than in other union republics and sectors of the national economy and more than a year before the April (1987) Plenum of the CPSU Central Committee, where the periods of time and the pace for transition to wholesale trade were officially formulated.

Those supply services in local areas where this work was undertaken without delay gained a significant amount of time and have been able to accumulate good experience in the conduct of wholesale trade. On the other hand, the agrosnaby [presumably: agricultural supply services] which bided their time and vacillated turned out to be taken by surprise. In 1988 they were unable to bring wholesale trade volumes up to 25 percent of the total volume of resources delivered to agroindustrial complex consumers.

Nothing else can explain the fact that under conditions in which the Kuybyshev, Saratov and Voronezh agroproms were provided with the same resources the level of wholesale trade ranged from 30 to 45 percent of all sales, whereas in the Tatar, Yakut ASSR, Penza, Rostov, Kurgan, and Orenburg agroproms, wholesale trade accounted for less than 20 percent. For the RSFSR Gosagroprom as a whole, material resources valued at more than 2 billion rubles, or 26 percent of the total sales volume, were sold under wholesale trade conditions in 1989.

This year the level of wholesale trade should account for no less than 40 percent of all resources delivered to consumers. For many agricultural committees this means that the sales of output without funds and limits should double, and even triple or quadruple. But this is the quantitative aspect of the matter. It is no less important that the increase in wholesale trade volumes be accompanied by qualitative improvements in providing for consumers and that kolkhozes and sovkhozes really become aware of these improvements. The task of supply services is to relieve farms and other enterprises in the agroindustrial complex of the need to search for funds and from paper work—filling out authorizations, requisitions, and other documents. To make the supply process simple and convenient.

Until this year, wholesale trade's method of operation was as follows. Receiving funds for material and technical resources, the RSFSR Gosagroprom distributed them to agroindustrial committees, and they distributed them to the rayon agroindustrial associations. And only here, at the rayon level, in the relationships between the rayon supply services and consumers, was true wholesale trade conducted—individual types of resources were sold to customers without funds and limits. The list of such resources included output that was provided in the amount of 100 percent or close to this level.

Thus wholesale trade operated within the framework of a funded system of supply and under the conditions of the previous system of management. We had to resign ourselves to this, since even this organization of it made it possible to simplify the procedure for customers to obtain resources and to increase the reliability of their supply.

Beginning this year a serious attempt is being made in the country to turn wholesale trade from an adjunct of the funding system of supply into a fundamentally new, self-adjusting mechanism to regulate supply and demand for industrial engineering goods.

This involves shifting individual types of output to provision through wholesale trade based on direct contracts between the manufacturing enterprises and the customers, as well as the supply and sales organizations acting in the capacity of middlemen. The policy aimed at reducing the proportion of the state order, and hence the proportion of resources being centrally distributed, is a

correct, promising path, and supply will be developed in precisely this manner in the future.

Under this supply system, manufacturing enterprises independently shape their production plans based on orders from customers or their middlemen and sell their output themselves. There are no production plans formulated in a directive procedure, no state orders, and no centralized distribution of output produced in accordance with funds and limits—there is none of this. In the normal functioning of a commodity market, without which wholesale trade is impossible, only the effective demand of consumers is a stimulus to increase the production volume of one product or another, as well as the reason to reduce it. Under these conditions, there can be no discussion of thrusting unneeded machinery and items on the customer which are produced by plants in series; this is still often the case. Relationships between the manufacturer-seller and the customer-purchaser are developed on the basis of the latter's demand, not the reverse.

Under the conditions of the agroindustrial complex the method of operation for wholesale trade may be developed as follows. It is clear to everyone that direct access by each kolkhoz and sovkhoz, and even a rayon supply enterprise, to the supplier plants is possible, but only in theory. In practice, orders for the delivery of products and the conclusion of contracts with manufacturing enterprises will be conducted for many more years at the level of oblast, kray, and republic agroproms, and their supply service will act in the capacity of a wholesale buyer from the manufacturers, but for kolkhozes, sovkhozes, and other customers of the agricultural complex, it will act as the wholesale seller, that is, a middleman in their relations with industrial enterprises.

The transition to direct ties with manufacturing enterprises is completely sound and moreover, it is objectively necessary. However, in practice the first experiment in organizing supply in this manner created many problems. In a number of cases the supply situation not only was not improved, but it even became more complicated; for certain types of resources, relationships with suppliers have not been established to date.

The main reason for these problems is that the Gosnab brought out a large quantity of products in short supply for so-called free sale when the demand for them was far in excess of the volume produced. As a result of this approach, while a market was established for production commodities, it also became a market for the producer of output—the seller, and there was simply nothing in this market for many customers to buy.

The conditions in this "market" are dictated every day by the manufacturing enterprises. Moreover, the transfer of scarce products for sale through direct contacts only increased the producer's dictates over the customer, which are manifested in unjustified price increases for output and direct extortion by the suppliers.

The new regulations on deliveries state that scarce products may be acquired "freely" only by those who have been receiving them through funds for the past 2 years at a minimum, as well as in the quantity which does not exceed the fund for the previous year. This means that the consumers' attachment to suppliers and the application of funds and limits have been only formally abolished. In fact, they are continuing to function. And wholesale trade in products for which the demand is significantly in excess of the supply does not turn out.

I think that what the Central Committee has repeatedly warned about is shown here: the tendency to speed up achievement of a desired goal without taking objective conditions and capabilities into account. And as a result, the objective is not reached and the idea itself is discredited.

We are stating our position to the Gossnab and attempting to find a way out of the situation that has taken shape. At the same time, we have enough unfinished work and neglect of our own. In a number of agroproms, they are very late in reacting to changes in the material and technical supply situation, and here and there they have not even gained an understanding of them.

I will give examples. While last year 2,300 contracts were concluded with suppliers of building materials by the agroproms of oblasts, krais and autonomous republics, 2,000 proposals to conclude contracts were sent to manufacturing enterprises this year. How do we interpret this? Perhaps in Belgorod, Volgograd, Kurgan, and Orenburg Oblasts, where the volume of contracts concluded for the delivery of building materials was 30 to 60 percent of the 1988 level, the requirement for these resources declined? It is obvious that this is not the case. The tactic of the supply agents now is to establish a few more ties with suppliers and conclude a few more contracts, not to "shake out" centralized funds.

Only 87 percent of the required number of contracts were concluded as of 1 January 1989. The situation with respect to equipment for processing sectors (61 percent), building and lumber materials (80 percent), electrical engineering (62 percent), and chemical products (85 percent) is of particular concern.

So it turns out that instead of taking advantage of the opportunity provided and trying to expand the network of their suppliers, a number of agroproms have acted in just the opposite way, and this means the direct loss of resources and the right to conclude contracts in the future, since the 2-year period for business contacts has been forfeited.

An important practical question which has to be resolved in organizing wholesale trade this year is the formation of a products list for the resources subject to sale without funds and supply orders.

The RSFSR Gosagroprom has approved and sent to oblasts and autonomous republics a list of the types of

products in the resources being distributed to them which are to be sold at wholesale, guaranteeing their allocation at the level of demand. The agroproms should supplement this list with the products obtained through territorial main administrations, as well as through direct ties with manufacturing enterprises. The list of products to be sold at wholesale must include those resources with funds or contracted volumes for delivery which meet the demand for them.

The list of resources formed in this manner is provided to all supply enterprises and customers.

The question of how to build the relationships between the supply enterprises and customers in wholesale trade later on does not require particular comment. We must be guided here by the regulations in force on wholesale trade and the new regulations on product supplies.

In organizing wholesale trade, more attention has to be devoted to the development of optimum stocks of resources at the various stages of supply in order to provide the customer with a guarantee that he can acquire a product at any time in the quantity needed.

One of the major changes in the supply procedure is the transfer of a large group of resources for distribution through the USSR Gossnab's main territorial administrations. The objective of this measure is to bring supply closer to the places where the resources are consumed. It is a very sound concept, and in the future we can expect further expansion of the list of products which pass through the territorial organs.

However, experience shows that relations with them are not developing well everywhere. Often the staff of the agrosnabs is at fault here. It should become familiar with the requirements of the territorial main administrations for preparing requisition documentation and all kinds of substantiations and calculations. Without this they will not succeed in safeguarding the agricultural complex's requirement for material resources. At the same time, Gossnab's territorial organs often apply the residual principle in allocating funds for the agroproms, which makes it much worse to provide for our customers.

The situation with respect to the allocation of building materials—glass, linoleum, tiles, tubs—for repair and maintenance needs is creating particular concern. We cannot resign ourselves to such an attitude by the TER's [possibly: territorial organs] toward the repair needs of kolkhozes and sovkhozes. We must stand up for the farms' interests more persistently and appeal to party and soviet organs for help. It must be remembered that the USSR Gossnab has established a priority procedure for material and technical support of the agricultural complex.

There is a real opportunity today to improve provision of resources for the agroprom by involving in economic turnover that part of them that is dead weight in warehouses and machinery yards. This will involve commission trade. In 1988, various goods valued at 20 million

rubles were sold this way. All the same, the results achieved with this form of trade are still inadequate.

First of all, it is necessary to extend the network of commission stores. All customers without exception should know precisely where, how, and under what conditions they can sell or buy something.

A second direction entails increasing the commodity turnover of commission trade. On average for the RSFSR Gosagroprom, each enterprise engaged in commission trade sells goods valued at 3,000 rubles monthly, but the average in individual agroproms is 100 to 200 rubles. Can we really speak in general about commission trade here? If we work in this way, there is nothing to make a fuss about, as they say.

The main reason for the low return from commission trade is the poor economic incentive of the people engaged in this work. In the majority of cases it is entrusted to one of the commodity specialists of a base, and a certain markup is added to his basic wage for this. Whether you sell a lot or a little, you will receive only these 20 or 30 rubles, no more and no less. Perhaps it is impossible to release the entire commission for the workers' incentive. It is possible that someone will say that 1.5 percent of the commission compensation does not solve the problem. But let us take an enterprise that sells nearly 10,000 rubles worth of material and technical resources per month through commission trade. And such examples exist. So 1.5 percent amounts to 150 rubles. And they may be obtained by one or two workers engaged in commission trade. This is a substantial amount, considering the wage level of our commodity specialists.

Another means of involving the unused commodity stocks available in warehouses in economic turnover is retail trade. The Krasnodar Agroprom was the first one in the RSFSR to engage in this activity, and its experience was reviewed at a session of the Glavagrosnab [presumably: Main Administration for Agricultural Supply] council. By the end of 1988 there were 108 retail trade stores operating in the RSFSR Gosagroprom.

The ways to further develop retail trade are the same as for commission trade. It is necessary to expand the network of stores, to better combine retail and commission trade under one roof and to increase the turnover of these stores. Such trading centers have to be established in the major populated areas where there is a mass market, and the store should not be situated within the territory of a base but have a separate entrance so that customers can get to it freely.

Leasing and cooperative principles have to be utilized to the maximum extent in organizing commission and retail trade.

An effective means of improving the provision of scarce and seldom used equipment for the agricultural complex is the organization of rental centers. More than 60 such

centers are already operating in the RSFSR Gosagroprom. However, the demand for them is much greater.

Agroproms cite the lack of equipment to make up a complete set as a reason for not establishing more rental centers. Many of them ask us for a special allocation of equipment. This will not happen. If it is considered necessary to establish rental centers locally in order to make efficient use of scarce cranes, bulldozers, loaders, trailers, and instruments, it is precisely there that a decision has to be made on the allocation of equipment for these purposes from the resources which the agroproms receive. There are no other sources.

The task of the supply service is to convince the managers of agroproms of the advisability of establishing rental centers. For example, in Kuybyshev Oblast they exist in every rayon, and all the equipment in short supply that was acquired by the oblast agroprom for 1989 has been transferred to them. An important role of the rental centers is that they provide services for rural residents, leaseholders, and cooperative members.

A major reserve for improving supply activity exists in the shift to a lease contract and the establishment of cooperatives. Enterprises of the RSFSR Gosagroprom supply service also have such experience. In the Belgorod Agroprom, for example, a rental center for technical equipment has been shifted to a lease contract. Lease contracts have also been made in the Kursk Agroprom for an equipment assembly shop, in the Penza Agroprom for an oxygen filling station, in the Novosibirsk Agroprom for a commission trade store, and in the Tyumen Agroprom for a loaders brigade at a supply base.

The main economic point of a lease contract in supply is that collectives lease facilities, equipment, machinery and other capital goods from the supply enterprises for an extended period of time. The leaseholders acquire complete independence in resolving production, economic, and organizational problems. The relationships between leasing collectives and the agricultural supply services are based on long-term contracts concluded for a period of not less than 5 years.

Shifting to lease forms of labor organization is purely voluntary. There can be no discussion of any pressure or of "driving" people forcibly into a lease. This does not mean that the agrosnab managers and specialists should do nothing and wait until the fruit ripens and falls into their hands, of course. Active organizational work is needed.

As far as supply cooperatives are concerned, we have recommended that they be established first in one or two rayons. All the questions that are not clear are being worked out now, and later a decision will be made on the advisability of shifting other rayon agrosnabs to cooperative principles.

Of course, the right to make decisions on these matters has been granted to the assemblies of authorized representatives of the kolkhozes, sovkhozes, and other enterprises in the agroindustrial complex. The only thing that we would like to guard against is that the campaign to establish cooperatives is not just turned into a change in masks, but such cases exist.

As an example, the labor force and standards for forming the wage fund and other funds continue to be set above the limit for established cooperatives. The question of the conditions under which the fixed capital of former rayon agrosnabs is transferred to them has not been resolved, either. The financial relationships with the budget and higher organs remain as before for the cooperatives. But the main point is that they continue to operate in accordance with the same model of cost accounting as the rayon agrosnabs and they do not acquire economic independence.

The Giavagrosnab supports cooperatives in supply. But they must be approached from below. Subunits under a lease contract must be established first in all our teams, and we must convince and teach people, and turn them into cooperative members; on this basis we must then establish rayon cooperatives, and later oblast cooperative unions as well.

An important part of our work on the structure of the service is the establishment of supply departments in each kolkhoz, sovkhoz, enterprise and construction site

in an agroprom. The volume of direct ties between customers and suppliers is increasing rapidly today. Under conditions in which suppliers have acquired the freedom to choose their customers, those customers that have the best developed supply service and know how to establish direct ties with suppliers more efficiently, with a commercial flair, will prove to be in front.

We cannot overlook the fact that a kolkhoz or sovkhoz now has economic and legal independence as well. It decides itself what and how much to buy. Attempts by our agrosnabs to bring equipment and resources to their bases by relying only on their estimates of the need for them and on their orders leads to a situation in which the farms refuse the resources, and they accumulate at the bases in the form of above-norm stocks. Supply departments in the primary production component could determine the needs of their kolkhozes and sovkhozes more responsibly and ahead of time by taking their financial situation and their ability to pay into account.

These are the basic ways to improve the work of the supply service. We must demonstrate effective concern every day for the needs of the kolkhozes, sovkhozes, and enterprises in the agricultural complex, do more for them and do it better. This will also be our contribution to fulfillment of the decisions of the March (1989) Plenum of the CPSU Central Committee.

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POLICY, ORGANIZATION

Measures to Reduce Long-Term Investment Projects Outlined

904C0002A Moscow *EKONOMICHESKAYA GAZETA* in Russian No 43, Oct 89 p 17

[Interview with USSR Gosstroy [State Construction Committee] Deputy Chairman L. Zarubkin, USSR Goskomstat [State Committee for Statistics] administration chief G. Zholudev and the deputy director of the scientific center of the Stroyindustriya [Construction Industry] firm, I. Titova, by *EKONOMICHESKAYA GAZETA* correspondent A. Gnidenko under the rubric "The Investment Complex—The Opinions of Specialists": "The Secrets of Dragged-Out Construction—An Inventory Will Help Puzzle Them Out"]

[Text] *The dissipation of capital investment is a true misfortune of our economy. The statistics testify that the computed average duration of industrial construction is more than twice the standard as before, while the efforts of participants in the investment process are often aimed at expanding the number of jobs underway rather than concentrating funds and resources. The plan for the current year includes 64,500 industrial construction sites and enterprises at which the building of individual facilities is underway. The assimilation of 391.6 billion rubles of state funds is necessary to finish them.*

What is happening? Why is the dissipation of funds and manpower continuing, how can the extremely negative trend be surmounted, how can the "incompletes" be brought up to standard?

USSR Gosstroy Deputy Chairman L. Zarubkin, USSR Goskomstat administration chief G. Zholudev and the deputy director of the science center of the Stroyindustriya firm, I. Titova, answer these and other questions of *EKONOMICHESKAYA GAZETA* correspondent A. Gnidenko.

G. Zholudev: It must be established that the dissipation of capital investment is continuing even under the new conditions of economic operation, even though the decisions that were made were seemingly aimed at raising the vested interest of construction workers and clients in the end results. A paradoxical situation has thus taken shape: the contractors and the clients, it turns out, still have more of a vested interest in expanding the scope of the investment process and less in its end results. This arises directly out of the operative mechanism of economic operation and is manifested in the opening up of new construction sites and facilities even at the expense of funds allotted for the operational start-up program, as well as in the insufficient attention paid toward issues of the technical and economic substantiation for construction plans. A selective analysis of the "incompletes" that was performed shows that the managers of many enterprises do not know whether the facility under construction meets contemporary technical standards or not. What technical level can we be talking about if the

technological ideas inherent in the "dragged-out construction" came out 15-20 years ago?!

[Gnidenko] How can this avalanche of incomplete construction be halted?

L. Zarubkin: The shutdown of a certain portion of the sites could be, in my opinion, a real way of narrowing the amount of construction underway simultaneously. And it would be expedient to halt construction altogether at places where outmoded technological ideas are inherent in the plans, so as to modernize or retrofit the capacity being created and, in certain cases, even to write off the expenditures as a waste.

The shutdown work is still being performed in insufficient amounts and the overall trend is not changing: the share of capital investment for mothballed facilities at the beginning of 1989 totaled just three percent of the overall amount of capital investment implemented since the start of construction. We get a very varied picture by ministries. Whereas, for example, the proportionate share of capital investment for mothballed facilities grew from 1.4 percent in 1985 to 3.9 percent at USSR Minlesprom [Ministry of the Timber Industry], for USSR Mingazprom [Ministry of the Gas Industry] it was the opposite, dropping from 2.9 to 0.5 percent.

[Gnidenko] Some economists feel that shutdowns do not entirely solve the problem of reducing the broad scope of construction...

I. Titova: It should be stated first and foremost that mothballing is not an end in itself, but rather simply an essential stage in the normalization of unfinished construction. Only stated thus will shutdowns facilitate an acceleration of construction through reductions in the amount of sites and facilities underway at the same time. (On the condition that a mechanism strictly limiting the opportunities for the client to include in the plans facilities that are not supported by financial, material and labor resources takes effect in the future.) It cannot be permitted herein that the spending being implemented for mothballed and halted sites remain as incomplete construction for too long. It is clearly necessary that, first of all, the enterprises prepare solutions connected with the possibility of utilizing the materials and structural elements and their sale to other bodies and the public with the participation of the local planning and supply bodies.

Second, the local planning bodies, with the participation of the sector ministries, should propose a list of sites at which redesign and retrofitting work should be performed so that they are once more included in the plan in a certain sequence.

[Gnidenko] How will the facilities "deserving" mothballing be determined?

L. Zarubkin: We can only get the initial data from a complete inventory of industrial construction. That will allow us to make the correct choices of the sites at which

it would be expedient to halt construction and which should be retrofitted, as well as where accelerated completion is required. Well-founded decisions are possible only based on sufficiently complete and trustworthy information obtained as the result of an inventory.

G. Zholudev: An analysis of the state of construction compared to the plan and standard requirements is being proposed during the inventory process; the correspondence of the plans being used to the requirements of progressive technical and economic indicators, world

achievements in scientific and technical progress and the requirements of environmental protection will be established. Inspections will make it possible to reveal empty places ready for the installation of equipment; proposals will be developed for the sequencing of construction and the operational start-up of capacity and facilities with a regard for their priority and construction readiness, as well as for the temporary halting or final cessation of construction or the redesign and retrofitting of construction sites and facilities.

Concentration of Capital Investment for Production Purposes—According to USSR Goskomstat Data %

	1985	1988	1989
Number of construction sites and enterprises constructing separate facilities not part of construction sites included in the plan, thousands	61.9	65.6	64.5
Number of sites included in the plan, thousands	326.2	310.9	318.9
Number of temporarily halted and mothballed sites, thousands	11.8	21.5	24.6
Estimated cost of construction included in the plan that is subject to fulfillment before its completion, billions of rubles	356.7	385.2	391.6
Estimated cost of temporarily halted and mothballed sites subject to fulfillment for their completion, billions of rubles	8.7	15.6	19.5
Capital investment allocated for start-up sites in percentage of the volume needed for their completion	91	95	83
Calculated duration of construction remaining before its completion, years	5.0	4.3	4.5
Amount of times greater than the standard duration of construction	3.1	2.5	2.6

[Gnidenko] Judging only by this long list of goals that the inventory will pursue, this work will clearly require profound preparation. What has been done on that plane?

L. Zarubkin: This work really is very complex and crucial. USSR Gosstroy and USSR Goskomstat, with the participation of USSR Gosplan and the USSR GKNT [State Committee for Science and Technology], have developed a program for performing the inventory of incomplete industrial construction. An experimental test of it was conducted last year at construction sites in Moscow and Yaroslavl oblasts, and this year in the Kazakh SSR. The final results of the inventory in Kazakhstan have not yet been summed up. But even what was proposed by the oblast inventory commissions for just eight percent of the productive construction sites and enterprises will make it possible to reduce the annual volume of capital investment by almost 50 million rubles. Taking into account the fact that start-up sites came up short some 190 million rubles this year, that is not so little.

The results of these local inspections have shown that the inventory program for incomplete construction could be used for a complete inventory across the whole country.

[Gnidenko] And what is its methodological foundation like?

G. Zholudev: The existing statistical reporting on the state and results of productive construction is envisaged

as the information base of the inventory—data on the actual and standard duration of construction, the volume of work performed and the fixed assets put into service, the balances of the estimated costs of construction and construction readiness, and mothballed facilities and their cost.

The Temporary Technique for Evaluating the Technical and Economic Level of Plans for production enterprises and sites under construction, which includes a system of indicators, the procedure for obtaining them, methods of monitoring and evaluating their trustworthiness and correspondence to progressive analogues and world levels that has been developed and approved by USSR Gosstroy and USSR GKNT will aid in determining the correspondence of the level of plans to contemporary requirements. Those indicators include the shift work of the principal equipment, the consumption of electric power per ruble of output, the proportionate capital investment, materials-intensiveness and profits. The inventory program also envisages the receipt of this data.

[Gnidenko] The inventory, in short, will require performing work on many planes and in many aspects along with filling in forms for a wide range of indicators...

I. Titova: The filling out of forms is only the first stage of the inventory. The second and chief stage of all the work is the adoption of planning solutions to normalize the incomplete construction.

L. Zarubkin: The necessity of instilling order is confirmed by the fact that while over 4 years of the current five-year plan, an increase in national income in the sum of about 60 billion rubles is expected, the increase in incomplete construction over that period will exceed 50 billion rubles. Commentary is superfluous, as they say.

The main thing today is to bring the incomplete construction up to the norm. The essential preconditions for the successful implementation of a new investment policy are being created in combination with a system of economic regulators that binds together the interests of the national economy and the interests of each specific participant in the investment process along with a rise in the level of planning.

HOUSING, PERSONAL SERVICES

Housing Output, Quality Deplored

904D0012A Moscow TRUD in Russian 17 Oct 89 p 2

[Article by by P. Fedorov, head of the AUCCTU Housing and Living Conditions Department: "The 'Housing-2000' Program: How to Provide for its Implementation"]

[Text] As a study of public opinion has shown, the shortage of housing and the poor quality of its construction disturb the working people even more than the poor supply of food and consumer goods, the injustice in the distribution of social welfare, the worsening ecological situation, and other problems. Let us remember that it is no coincidence that the 27th CPSU Congress included the following among its top-priority tasks: to provide every Soviet family with a separate apartment or individual house by the year 2000. The Congress of People's Deputies reaffirmed the correctness of the policy adopted.

About 14 million families and single citizens are standing in line today for improvement in their housing conditions, more than 11 million persons are living in dormitory facilities, over 5 million are living in dilapidated and emergency housing, and 10 percent of the urban families are occupying rooms in communal apartments and renting housing. At the same time, nearly half of the country's population have a living space of less than 9 square meters per person, which is below the sanitary standard and affects people's health accordingly.

Calculations show that in order to resolve the problem successfully by the end of the century, it is necessary to build a minimum of 35 million apartments. This is equivalent to putting 2.3 billion square meters of living space in housing, or more than 1 billion square meters on the average for each of the next five-year plans. If it is taken into account that the largest volume of housing construction in all the preceding five-year periods was 552.2 million square meters, the vast amount of work to be done becomes clear.

Over the past 3 years, substantial changes have taken place in the housing policy. A program to develop the housing construction industry and the building materials industry was worked out and is already being implemented. Many obstacles to individual, cooperative, and economic methods of construction have been removed. A decision was adopted to authorize the allocation for housing of no less than 10 percent of the capital investments being put into industrial construction. All this has made it possible to introduce 384 million square meters of overall living space in housing, or 1.2 times more than in the first 3 years of the previous five-year plan.

However, those same 3 years clearly demonstrated that these steps are obviously inadequate to reach the goal that had been set. The existing pace makes it possible to

commission only 650 to 660 million square meters in the current five-year plan. The proportion of expenditures for housing construction in the total volume of capital investments in the national economy remains low; it amounts to 17 percent, which is significantly less than in 1960, for example.

The trade unions see a further sharp increase in the volume of housing construction, both through the funds and efforts of enterprises, organizations, and the public, as well as through a simultaneous increase in state centralized capital investments, as a realistic solution.

Unfortunately today, when there is an increase in the proportion of enterprises' funds put into housing construction and an increase in the public's contribution, centralized state capital investments not only are not being increased, they are even being cut back. The reduction in the current year totaled 2 billion rubles, compared with 1988.

The trade unions believe that in the current situation the state should not shift its share of responsibility for resolving the housing problem to the shoulders of labor collectives and the public. The economic capabilities of many industrial enterprises and budget organizations do not provide grounds at present to expect their active participation in housing construction with their own funds. The majority of families and single citizens, especially young people, who are in need of improved housing conditions are also experiencing serious financing difficulties. Not to take into account the situation that has really taken shape is to deliberately ruin work of tremendous social importance.

In resolving the housing problem, a major role is assigned to the expansion of individual and cooperative housing construction. The main impediments to the work, as before, include the lack of building materials, difficulties with the allocation of plots of land and obtaining credit, and the search for a contracting organization.

In retail trade, for example, the shortage of building materials is being felt everywhere. In 1988 the commercial lumber delivered for the market amounted to 86 percent of the plan and less than 60 percent of the amount ordered by the trade. A similar situation took shape with the delivery of lumber, cement, and a number of other building materials. At the same time, part of the market funds often are withdrawn from retail trade and transferred to cooperatives, enterprises, kolkhozes, and other organizations at the instructions of local organs.

The situation involving the extension of credit to those building their own housing has become acutely aggravated. According to estimates of the USSR Sberbank [State Workers' Savings and Credit Bank], it is necessary to allocate about 6 billion rubles this year to extend long-term credit to the public. However, the resources were found in the first 6 months for only a half billion rubles. Our appeals to the managers of the USSR Sberbank for an increase in credit did not produce positive

results. Moreover, the conditions for extension of credit do not enable many families to make use of the USSR Sberbank's services. For example, a rural resident who has taken a loan for 50,000 rubles must pay interest totaling half of this sum, to be repaid over a 50-year period. The conditions facing urban residents are even more harsh.

For this reason, there are already cases today in which credits obtained are returned and construction is given up. In the Karelian ASSR, only 256 families out of the 1,400 persons who received plots of land have begun to build housing.

If we want the public to really take an active part in solving the housing problem, the problems of providing building materials must be resolved without delay, we must put an end to the red tape in allocating plots of land, and we must conduct a policy aimed at increasing citizens' incentive to build housing. For example, by reducing the interest rate for a loan, by differentiating it for various groups of the population, by establishing a state subsidy for the purchase of homes and apartments, and by the organized delivery of the needed building materials ordered by those who are building for themselves. The centralized capital investments that are being cut back today could be utilized for precisely these objectives.

The shortage of building materials and sanitary and engineering equipment is also a deterrent when other means are used to build housing. At the same time, the steps outlined to reinforce the building materials industry and develop the production of cement, bricks, and local building materials and to expand slab and large-panel housing construction are lagging considerably behind the periods of time set by the government.

At the end of last year, for example, because of the shortage of finishing materials and sanitary and engineering equipment, hundreds of houses that were practically completed were not accepted for use.

At the same time, the problem of careful use of physical resources is critical as before. About 5 million tons of cement are lost in transit and during loading and unloading alone. Just as much of the scarce material is lost at construction sites. As a result, every fifth cement plant is operating today to cover these losses. Up to 35 percent of the lumber goes into so-called soft waste and is not used for its purpose.

There are also considerable reserves in construction organizations. The use of capacity in large-panel housing construction enterprises as a whole has reached only 85 percent. Because of this, the country received 10 million square meters of housing less in the past year alone.

Shortcomings in the organization of labor and wages and the establishment of safe production conditions continue to play a role. The lease contract and the cooperative movement have not been fully developed in housing construction.

Plans for major repair of housing are chronically unfulfilled, and this is a consequence of the poor production base for housing. The funds allocated for its development are 2 to 2.5 times less than the minimum needed. As a result, the housing fund is ageing prematurely and being put out of action. The volume of such housing continues to increase. Thus, while 17 million square meters of housing were removed in 1987, there were 20 million square meters in 1988, which is equivalent to 15 percent of the new construction.

The trade unions should establish strict supervision over fulfillment of the housing programs stipulated and carry out purposeful organizational work to create the necessary conditions for the development of individual and cooperative housing construction. They should defend the interests of the working people without looking back at anyone, and not give a moment's peace to loafers, bureaucrats, and procrastinators. They should not wait for instructions from the top, but look for ways to speed up solution of the housing problem themselves. Only in this way can they cope with the task that has been set and provide every Soviet family with a separate, well-equipped apartment or individual house.

FUELS

Official Interviewed on Role of Fuel-Energy Complex

904E0013A Moscow PRAVITELSTVENNYY
VESTNIK in Russian No 21, Oct 89 pp 2-3

[Interview with USSR Council of Ministers Bureau for the Fuel and Energy Complex First Deputy Chairman Grant Dzhavanshirovich Margulov by PRAVITELSTVENNYY VESTNIK correspondent V. Lvov under the rubric "Standing Bodies of the USSR Council of Ministers": "Power Engineering: Where to Go From Here"]

[Text] *Presenting the interviewee: born in 1927, Armenian. Completed Azerbaijan Industrial Institute. Began working life as a grinding-machine operator. Worked as a technician, engineer at a design bureau, then at a plant. He was an operator and geologist in the oil and gas fields of Azerbaijan, chief geologist, chief of the oil-and-gas-field administration, and chief of the Bukharanestgaz [Bukhara Oil and Gas] Association. Chief engineer of the technical administration in USSR Mingazprom [Ministry of the Gas Industry] in 1966. Chief of the economic-planning administration and member of the USSR Mingazprom collegium in 1973. Deputy in 1978 and first deputy minister in 1981 of the USSR Gas Industry. First deputy chairman of the USSR Council of Ministers Bureau for the Fuel and Energy Complex since 1986.*

[Lvov] Grant Dzhavanshirovich! How are the role of the fuel and power complex and the functions of the bureau being re-interpreted with regard to the prevailing situation in the economy, its social re-orientation, the tasks of reviving the ecological climate and the activation of public opinion on these issues?

[Margulov] A reduction in expenses on the development of the base sectors of the national economy, including its fuel and power complex, is required under these conditions. It is essential at the same time to construct more housing and other social and consumer facilities, raise the comfort level of work and everyday life and eliminate heavy manual labor, which is in turn impossible without a further deepening of electrification and gasification.

This set of contradictory problems can be solved only on the path of intensive scientific and technical progress, including the strengthening of energy conservation in all sectors of the national economy, the bringing of the sectors of the fuel and power complex themselves to a new technological and ecological level, and marked changes in its sector and regional structure. All of this can be achieved only with the careful fine-tuning of the mechanism of economic operation and via economic and legal management of national-economic, intersector and inter-regional interconnections, which concern not only the internal structures of the complex but its far-flung contacts as well.

These tasks also condition the new role of the complex in the economic and social development of the country and the ever greater re-orientation of the bureau's functions toward solving major intersector problems using primarily economic and legal methods of regulation.

[Lvov] The fuel and power complex includes six ministries. Isn't that too many? What are the development trends in the structure of the complex? Can the bureau manage the sectors without the ministries?

[Margulov] The fuel and power complex is one of the largest national-economic multi-sector systems operating over the enormous territory of our country as well as having extensive ties with foreign countries.

Each of the sectors that are part of the system possesses specific features characteristic only of it. They are first and foremost the centralized operational management of the Unified Power System of the country, the state system of gas supply and the network of petroleum-gathering and trunk oil pipelines. The coal industry, accomplishing the production of coal using both underground and open-pit methods, its refinement, the production of mining equipment and contract capital construction, is characterized by a multi-sector structure.

The USSR Ministry of Geology and the USSR Ministry for the Construction of Enterprises in the Oil and Gas Industry have far-reaching spheres of activity.

All of the enumerated sectors are base ones for the national economy, which also defines the necessity of centralized state management of them through the corresponding ministries.

The number of ministries is close to the optimal one at this stage. They do much crucial work for the uninterrupted supply of fuel and electric power to the national economy. Today it is very important to provide clear-cut technological and contract discipline for subordinate enterprises, simultaneously improving and consolidating economic methods of economic management on the spot.

Work is continuing in the sectors that are part of the complex to improve management structures, and its democratization is proceeding. The structural subdivisions are being reduced sharply, and main administrations are being abolished. Independent economic-production complexes guided by a council of the concern and a board based on democratic principles are being created. Questions of the possible creation of a group of associations and concerns in the coal and petroleum industries are also being worked out.

In speaking of the ministry management, I would like to give my own opinion on that score. Radical changes in the objective situation of the fuel and power sectors have occurred over the last two decades since the formation of the industrial ministries. The role of the ministry in the autonomous resolution of tasks for energy conservation in the national economy has declined. They can be

resolved less and less through the manpower of individual ministries. Multi-sector approaches are required here. Such a change in the situation has of course had a marked effect on the activities of ministry management.

Production and economic activity within the ministries have been seriously complicated. Today practically every new machine or piece of equipment manufactured at ministry enterprises requires the efforts of many sectors. Scientific and technical progress has become primarily inter-sector. These issues will be resolved more and more on the spot at the enterprises according to contracts via economic accountability [*khozrashchet*].

The country's power engineering should proceed in this new stage of development along the path of creating and accumulating a systemic reserve of power resources overall and improving the technical and economic capabilities, broad maneuvering and mutual replaceability of individual links of the power complex.

The current sector ministries, it seems to me, are thus more and more losing the position of monopolists and will, to the extent of the concentration of production, evolve into management bodies directed more toward incarnating the development strategy of a specific sub-sector as a part of the unified national-economic complex.

The possibility of the formation of one ministry of power engineering with the functions of coordinating the economic and technical policy of the Unified Statewide System of Fuel and Power Supply for the National Economy is not ruled out for the future, when economic accountability and self-financing have been consolidated in the local areas.

[Lvov] The structure of the bureau has basically been set up according to the sector principle. Isn't that leading to an overlapping and redundancy of functions among the subdivisions of the bureau and the ministries? What changes have occurred in the structure of the bureau? What new tasks have appeared there?

[Margulov] Even if we look at purely external features, the structure of the bureau is not a sector one today: three of the six departments in the apparatus are inter-sector ones, and another is an integrated one for the group of producing sectors. The substance of the work of the bureau apparatus itself is of a sector nature to an even lesser extent.

The Bureau for the Fuel and Energy Complex was created for the purpose of improving the supervision of the complex, raising the level of coordination in the work of the fuel and power sectors and strengthening their role in implementing the USSR Energy Program.

The bureau, a standing body of the USSR Council of Ministers, facilitates the resolution of major intersector tasks in raising the efficiency of energy supply for the national economy, rationalizing deliveries of fuel and power resources, including for export, pursuing and

realizing a policy of energy conservation in the national economy, upgrading production and raising the efficiency of the fuel and power complex overall. In this regard the structure of the bureau, including highly skilled specialists in various realms of the national economy, is not leading to duplication of the functions of the sector ministries, but is rather aimed at solving intersector problems, materially relieving the USSR Council of Ministers and its presidium of the review of a multitude of routine issues and raising the timeliness and quality of the work of supervising the sectors of the complex.

Sectors for planning the development of science and technology and incorporating the achievements of scientific and technical progress and progressive experience, as well as improving the mechanism of economic operation, have been formed recently for the purpose of strengthening work in the realm of scientific and technical progress in the sectors of the complex and improving the mechanism of economic operation and the organizational structures at the bureau without increasing the number of workers in the apparatus.

The creation of a department that would be engaged in earnest with problems of energy conservation and ecology, that is, problems that encompass the intersector ties of many sectors in the national economy, is also being proposed.

[Lvov] As is well known, a difficult situation has taken shape in the coal industry of late. What role has the bureau played in resolving the conflict, and what lessons have been extracted from it?

[Margulov] The bureau took an active and direct part in all stages of resolving the labor conflict in the coal industry. Supervisors and higher officials from the bureau apparatus were part of the governmental commissions. The bureau, with the participation of central economic bodies, headed the preparation of the USSR Council of Ministers decree that defined the concrete steps for the practical realization of the joint decisions of the governmental commissions and the strike committees.

Today we are monitoring the course of fulfillment of this decree. We assign especially great significance to glasnost and openness in evaluating progress in fulfilling the obligations that have been taken on.

What basic conclusions did we draw from the mass labor conflicts in the coal industry? The first conclusion is that it is not permissible to drag out the resolution of urgent problems in the development of the social sphere and the economics of the enterprises in the complex. Second, we must acknowledge that the set of measures projected for the USSR Minugleprom [Ministry of the Coal Industry] for an expansion of the operational economic independence of the enterprises, radical changes in the management system in the sector and the rapid development of the social sphere, and first and foremost housing and cultural construction, as well as the decisive revival of

the ecological situation, is urgent to this or that extent in the other sectors of the complex as well.

Under these conditions it is especially important to uncover and resolve in a timely manner the most acute of them, and first of all those issues that could be resolved on the spot without significant expenditures.

Great opportunities in this work are associated with the development of economic reform and the creation of legal and economic conditions for the independent earning by enterprises of the funds essential for raising pay and resolving social issues.

We cannot at the same time fail to say that the past strikes have created an extraordinary situation and have complicated the normal functioning of the national economy. And we are now suffering enormous difficulties in creating the essential fuel reserves on the brink of winter.

I am convinced that strikes are not the way to resolve conflicts in a law-governed state. Work at enterprises with an uninterrupted production cycle—such as power engineering, the fuel-producing and chemical sectors or rail transport—should under no circumstances be halted. All conflicts that arise can and should be settled by law.

[Lvov] As is well known, a new edition of the country's Energy Program is being prepared. What is most important in that program? How is the public being made an ally in its adoption and fulfillment?

[Margulov] The draft of the new edition of the Energy Program has to a considerable extent been rid of its customary production filling—it only details the development of the complex in the overall channel of restructuring.

Several versions of the Energy Program have been developed. Work is currently underway on a fundamentally new addition to this draft—a regional section is being composed that will be closely linked with the legislative provisions and concrete plans for realization of republic and territorial economic autonomy. Development variations for power engineering connected with indicators of economic and social development, including a description of changes in the environment, will be proposed for each region. The outlines of inter-regional deliveries of fuel and power resources and the corresponding economic obligations of the regions on issues in the development of energy conservation, power engineering and the protection of the environment will also be defined. We hope that the regional sections of the country's draft Energy Program will become the subject of creative re-interpretation on the part of the public, which will soon be sitting in judgment on it. The issue is not only to make the public our ally in the adoption and fulfillment of the Energy Program, but the co-author of the document as well.

The solution of ecological problems is an important direction of our efforts. The USSR Council of Ministers

has adopted a resolution to develop the "Ecologically Clean Power Engineering" state scientific and technical program. It envisages the development of technology and equipment for a new generation of enhanced-safety nuclear power plants, the creation of ecologically clean thermal electric power plants using solid fuel and economical equipment for the utilization of solar, wind, geothermal and other non-traditional sources of energy. Technologies and equipment for the production of highly efficient types of fuels using the more extensive processing of coal and natural gas will also be created.

I can note with satisfaction that the contests announced within the framework of the "Ecologically Clean Power Engineering" program have attracted a great deal of attention among the scientific and technical community, and hundreds of proposals in various aspects of the program have already been received.

The pursuit of an active energy-conservation policy is decisive in the draft of the new USSR Energy Program. We must decisively reject the directive method of energy conservation, however. We need not just directives on the necessity of economy, but a real mechanism of economic operation that would in fact provide for the rational utilization and economy of fuel and power resources.

I would like to say the following in this regard.

Legislative activity in resolving issues of the rational utilization and economy of energy resources has become more active of late in all the industrially developed countries. Special bodies, diverse in form, have been created to implement the policy of energy conservation. Our country is essentially the only one in the world among the major industrial states that lacks clear-cut legal regulation of this most important area of the national economy.

The urgency of the legal regulation of the fuel and power system of the country is currently taking on especial significance in order to accelerate the conversion of the country's economy onto the primarily intensive path of development. The country's economy can no longer be oriented toward straightforward gross increases in the extraction and production of fuels and other energy resources.

There are enormous unused reserves and losses of energy resources in practically all of the spheres of social production in the national economy of the USSR. They have been valued at 650-700 million tons of standard fuel, or about 30 percent of the country's energy consumption. The bringing of those reserves into national-economic circulation is taking place intolerably slowly despite the fact that expenditures on their realization are considerably lower than the production of energy resources.

The USSR lags many countries in the rate of reduction of energy-intensiveness of the national economy.

Proposals are being developed at the bureau with the participation of scientists and specialists of the country for USSR legislation on the legal regulation of energy conservation, having in mind the creation of a system of economic measures to stimulate the rational utilization and economical consumption of fuels and electrical and thermal power. The methods of planning enterprises that produce and consume fuel and power resources should be reviewed, as well as the requirements for standardization and the incorporation of the latest energy-conserving technologies and equipment, along with instruments that track the consumption of fuel and power. Especial attention should be devoted to questions of the design engineering, construction, modernization and operational start-up of facilities. A tightening of the responsibility of enterprises and officials for violations of legislation on power utilization in the national economy is what is in mind here.

The adoption of these proposals and a tightening of a regimen of economy would make possible, according to preliminary calculations, the bringing in of no less than 300 million tons of standard fuel as early as the 13th Five-Year Plan.

These proposals also assume widespread discussion with the public. This approach corresponds more to the contemporary economic model of economic operation and world experience in devising major program documents.

Structural Composition of the USSR Council of Ministers Bureau for the Fuel and Energy Complex

USSR Council of Ministers Bureau for the Fuel and Energy Complex

Scientific and Technical Council

Development of the Fuel and Energy Complex Department

- Sector for the development of plans in science and technology
- Sector for economic analysis and planning
- Sector for improving the mechanism of economic operation
- Sector for foreign economic ties

Fuel-Producing Sectors Department

- Sector for the coal industry
- Sector for the petroleum industry
- Sector for the gas industry
- Sector for geology

Nuclear Power Engineering Department

- Sector for the development of nuclear power plants
- Sector for the nuclear industry

Power Engineering and Electrification Department

- Sector for electrification and rural construction
- Sector for thermal and hydroelectric power plants

Capital Construction Department

- Sector for economic analysis and planning of capital construction

- Sector for the development of production capacity and social facilities

Energy Conservation and Ecology Department

Power Plant Fuel Sources Evaluated

904E0020A Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 31 Oct 89 p 1

[Article by USSR GKNT [State Committee for Science and Technology] Deputy Chairman M. Kruglov and USSR GKNT department chief V. Dobrokhotov, Moscow, under the rubric "We Look to Tomorrow": "Coal-Based Power Engineering"]

[Text] Coal comprises less than a third of the total fuel consumption at thermal electric power plants [TES] in our country. The remaining portion is fuel oil and natural gas. Is that too much or too little? The share of coal in the United States, by way of comparison, has taken quite different proportions—it is three quarters of all the fuel burned at electric power plants. We will also have to arrive at expansion of its use on many levels. The expenditure of oil and natural gas for power-engineering needs should be reduced.

But this path entails some extremely complicated problems. The main issue is how to make coal-fired power engineering ecologically clean. Today it is among the principal polluters of the air. It has been calculated that the country's thermal electric power plants using solid fuels discharge about 20 million tons of sulfur and nitrogen compounds into the atmosphere every year. It is well known that the Soviet Union has taken on international obligations, according to which the cross-border transport of sulfur and nitrogen oxides should be reduced by no less than 30 percent. How can coal-based power engineering be developed under these conditions?

There is one way out: the modernization of thermal electric power plants. Part of this task is being resolved by the organizations of USSR Minenergo [Ministry of Power and Electrification] and USSR Mintyazhmash [Ministry of Heavy, Power and Transport Machine Building]. More effective electrostatic filters for the removal of solid particles from exhaust gases are being installed and are already in operation in particular. It is true that their reliability and efficiency factors are still inferior to foreign ones, but that can be corrected.

Matters are worse off with removing harmful gaseous compounds. Here the incorporation of technical solutions forces a rise in capital investment and the production costs of thermal and electric power. The expenditures for scrubbing sulfur oxides from smoke alone, for example, total from 20 to 30 percent of the overall capital investment in the construction of electric power plants in West Germany. Their competitiveness can be reduced even more in this regard compared to alternative directions for power engineering, and first of all AESs [nuclear power plants]. Nuclear power plants generate power at significantly lower expenditures today both in the USSR and abroad. A GRES [state regional

electric power plant] can compete with them only in regions with the open-pit mining of cheap coal.

Under what conditions is it possible to discuss the promise of coal-fired thermal electric power plants? The cost of the coal fuel should be lowered and the quality and stability of its properties raised. There is no other way to that except the construction of large coal strip mines with progressive technologies and high-capacity automated mining and transport equipment, as well as modular-unit mining and enrichment combines.

The use of highly concentrated coal and water suspensions as a fuel promises great advantages. Nitrogen-oxide emissions are reduced by 30-40 percent in burning it. Work is being completed on the creation of the Belovo-Novosibirsk commercial-test pipeline, through which the suspension will be fed to two boiler units of the Novosibirsk TETs-5 [central heat and electric power plant]. We should clearly move toward the creation of larger such systems of pipeline transport.

There is another reserve as well—the incorporation of power boiler installations with “fluidized-bed” furnaces. They have already been assimilated quite well in low-capacity power engineering, while at the larger plants, well, practice makes perfect, as they say. An experimental boiler with a productivity of 420 tons of steam an hour has been sitting on the site of the Barnaul TETs-3 for two years now awaiting installation. There is no unit with such capacity in world practice. Its start-up would make it possible to determine more clearly the prospects for burning coal in fluidized-bed furnaces and their capabilities for solving ecological problems.

The technology of converting coal into more convenient energy carriers right in the places where it occurs seems to be the most expedient. We have in mind underground gasification, as well as the development of a microbiological method of creating economically efficient processes for the hydrogenation of coal with the production of synthetic liquid fuels using them.

Many of the scientific problems connected with creating treatment processes for coal and shale, the receipt of liquid fuels and a broad spectrum of raw materials for the chemical industry, the enrichment of low-quality lignites and other coals and the extraction of sulfur and waste rock from them have unfortunately not yet been solved. Many of the progressive solutions that already exist in this realm could have been realized in practice by now if the fulfillment of scientific and technical programs had not been disrupted, with Minenergo, Mintyazhmash, Minugleprom [Ministry of the Coal Industry] and a number of other ministries and agencies to blame. It is difficult to explain the fact that there is as yet not a single commercial installation in our country for the removal of sulfur oxides from exhaust gases, while the construction of new electric power plants without them is prohibited by law in the United States, West Germany and some other countries. Work on such installations has been underway here for a decade and a half. First it was

decided to equip the Ryazan GRES—where the use of 300-MW [megawatt] power units using Moscow-region coal and sulfurous fuel oil was planned—with them. But matters had scarcely reached the design-engineering stage for that electric power plant when USSR Minenergo changed its mind and shifted the installations to the Dorogobuzh GRES. And what of it? The Ryazan GRES has been operating for many years, while the sulfur oxides at Dorogobuzh are not even being removed yet.

Are there grounds to suppose that the situation with the incorporation of new technology in coal-based power engineering will be substantially altered in the next few years? It seems to us that there are not. Serious obstacles have arisen in the realization of scientific and technical measures requiring major capital spending under the conditions of economic accountability [*khozrashchet*] and self-financing. They should after all be financed basically from the funds that are earned by the enterprises themselves. And when the discussion concerns measures to protect the environment, the labor collectives as a rule give preference to financing their own social programs. This contradiction, in our opinion, must be regulated legislatively.

Those who along with the developers are engaged in testing the new technical solutions are clearly also in need of state support. And the role of the USSR GKNT and its scientific councils should be decisive here. The partial financing of “risky” research and development from the state budget is widely practiced abroad. About half of the almost 6 billion dollars that are projected to be spent on the creation of ecologically clean coal technologies in the next few years in the United States, for example, has been requested by the Department of Energy from the federal budget. The remaining expenses will be borne by private companies with a vested interest in the utilization of the new technologies. It is important to note that a large part of the budget appropriations will be spent for the modernization and retrofitting of operational electric power plants and other power facilities so as to revive sharply the ecological situation.

It is completely obvious that a concentration of the country's scientific and engineering manpower in priority areas of scientific and technical progress is needed today. The first step toward this has been taken. The USSR Council of Ministers, by request of the State Committee for Science and Technology, USSR Gosplan and the Academy of Sciences, has approved a list of state scientific and technical programs. It includes approval for the “Ecologically Clean Power Engineering” program. It has two directions for the development of coal-based power engineering—“Ecologically Clean Thermal Electric Power Plants Using Coal” and “The Fuel of the Future.” Last year USSR GKNT announced competitions for the development of concepts for four thermal electric power plants that differ in the types of coals used: Kansk-Achinsk, Ekibastuz, Kuznetsk and Donetsk anthracite culm. One of the principal requirements for the plans is to reduce the sulfur-oxide content of a cubic meter of exhaust gases to 0.2-0.3 grams and

that of nitrogen oxides to 0.15-0.2 grams. No less than 80 percent of the ash and other solid wastes should be used in the national economy.

What have the results of the competitions shown? Not one of the works received more than 75 percent of the votes necessary to be awarded first place for the aggregate of requirements. And the judges awarded prizes to just 12 works meeting the concepts for the creation of ecologically clean coal-fired thermal electric power plants to this or that extent. Two other competitions have been held under the "Ecologically Clean Power Engineering" program through this date: the development of concepts (technology) for the production of enriched solid fuels for municipal needs and the creation of an ecologically clean enterprise for the production of new types of energy carriers based on underground coal gasification.

And another thing. The solution of problems in the multi-level utilization of solid fuels could be accelerated and the pollution of the environment reduced to a significant extent, under the new conditions of economic operation, with the aid of legislative regulation in the realm of the utilization of power resources and energy conservation. But shifts here, alas, have yet to be observed.

Gas Industry Communications System Detailed

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PROMYSHLENNOST in Russian
No 10. Oct 89 pp 40-43

[Interview with USSR Mingazprom [Ministry of the Gas Industry] Power Engineering and Communications Main Administration Deputy Chief Vladimir Ilich Leonov by GAZOVAYA PROMYSHLENNOST special correspondent G. Monina under the rubric "Topical Interview": "The Basic Activity of Non-Basic Production"]

[Text] *The sacred phrase "production communications" will elicit an understanding smile from the uninitiated, but the communications specialist engaged in this most productive type of communications only sighs mournfully, knowing and feeling himself the attitude of both the management and the workers of basic production toward his own non-basic activity. Communications exist—they don't notice it, but try and exclude them from our life and everything will stop. Today the culture and level of development of our society are determined by the state of the infrastructure, which includes communications as well. One could probably assume, for instance, that had control equipment been better perfected, i.e., the communications equipment on the pipeline around Ufa, that the tragedy could not have happened. The reliability of any type of production and its technological feasibility and efficiency, and ultimately the quality of the basic production, depend largely on the organization of so-called production-process communications. Every sector of the national economy, including the gas industry, has its own network*

of production-process communications with its own specific nature and features conditioned by the specific nature and features of basic production. Our special correspondent G. Monina interviewed the deputy chief of the Power Engineering and Communications Main Administration of USSR Mingazprom, V.I. Leonov, in order to acquaint our readers with an "auxiliary" service of the gas industry new to them.

[Monina] Vladimir Ilich! Questions of equipment reliability came to the fore immediately following the tragedy at Ufa. Control and communications systems, called upon first and foremost to resolve namely that task, have no small role in ensuring that reliability. Please tell us how those communications are organized in the gas industry and their role in the basic technological process.

[V.I. Leonov] You are correct, the problem of raising the operational reliability of gas pipelines is taking on paramount significance today. It is well known that the nature of production in the gas industry is linked with a unified technological process wherein the centers for gas production are located at a considerable distance from the areas of the greatest consumption in difficult-to-reach northern areas, which leads to growth in the length of gas-transmission systems. The role of operational communications providing centralized monitoring and control of the processes of gas production, transmission and processing is difficult to overestimate. The aging of the pipes and their corrosion can lead to serious accidents, and that is why communications should be provided with any point on the gas pipeline.

The structure of the communications network of USSR Mingazprom is arranged in accordance with the structure of sector management. The real-time supervision of the trunk system is basically accomplished by the Central Operational Communications Station, while the technical operation of the operational-communications lines on the spot is done by the communications administration or service organized within the production association.

[Monina] If I understand it correctly, all lines of the pipelines, which we see from the map in your office criss-cross the country, should be accompanied by their own operational-communications lines. These are, in the terminology of communications workers, long-distance communications lines. They probably largely coincide with the trunk intercity lines of the nationwide telephone network, don't they? If so, why does your agency create its own networks rather than lease channels from the Ministry of Communications [Minsvyaz]?

[V.I. Leonov] No, that is not so. Our trunk lines as a rule do not coincide with the nationwide system. The cables of intercity communications are not laid to the remote and hard-to-reach places where gas is produced, while operational communications must be there.

It has thus shaped up that the networks of operational communications were local and initially constructed

along the gas pipelines from their fields. Only at the beginning of the 1960s, when their numbers increased sharply, did the task arise of creating a unified communications network for the sector. This was legislatively fixed in 1975 by the SNiP [Construction Norms and Regulations], where the construction of communications lines was required in designing gas pipelines. This work unfortunately cannot be done simultaneously for objective reasons. We are forced to organize the communications in stages, and we organize temporary communications—the so-called communications for the first period of operation—before the start-up of the planned communications equipment. It is namely the high requirements for the reliability of gas supply that do not permit us to make use of the intercity lines of the nationwide network. Although we do lease them on certain stretches for the period of the start-up and fine-tuning of the gas lines, as well as on sections where we cannot organize our own communications lines for objective reasons.

[Monina] And how is your long-distance network coordinated with the country's unified automated communications network (UACN)?

[V.I. Leonov] Not only long-distance communications, but the local communications that are part of the general operational communications of the sector, should meet the requirements of the UACN. This means that we must ensure their organizational and technological unity with the nationwide networks in organizing our networks. We use basically the same equipment and the same principles of organization of communications. True, we receive this equipment according to the "leftover principle"—that which remains after satisfying the requisitions of Minsvyaz.

[Monina] If you were to specify the principles of organization of communications in the sector, what types of communications do you have aside from general operational communications?

[V.I. Leonov] They are real-time operational communications taking into account the specific nature of each production process separately—from the extraction of the gas to its processing—providing for their high-quality execution and uniting them with a unified control system. These include central telephone dispatch communications (CDC), the regional telephone dispatch communications (RDC), line dispatch communications (LDC), communications for network conferences, data transmission for central and line telemechanics, data transmission for ASUs (automated control systems) and telephone and radio communications within facilities. All of these types of communications make it possible to supervise and control the mode of operation of the pipeline, organize the telemechanical, telemetry, remote-signals and remote-control services and provide for data transmission among various services, as well as among sector computer centers etc.

[Monina] The equipment for these types of communications is also standard?

[V.I. Leonov] No. The question of equipment is acute. Industry cannot provide us with standard equipment. The gear we have in our inventory of both domestic and foreign manufacture is extremely diverse, which makes its operation very difficult, but it has its pluses as well that I will mention a little later. The diversity is explained by the fact that domestic industry does not put out gear for production communications, one could say. So it is exceedingly inconsiderable in volume and assortment and must be obtained by each sector for itself to resolve its own communications problems. We, for example, i.e., our sector (and I have been working in it for about 30 years), have from the very beginning taken the path of ordering what we need. True, we were in a better position compared to other sectors, since we got foreign currency for gas and could obtain the essential equipment abroad for it. We have radio equipment of Japanese, French and Italian manufacture. High-quality gear, and our specialists raise their skill levels considerably working with it, and taking into account the fact that several types and gear for various purposes accumulates at the communications centers, a support worker there becomes simply a generalist and specialist in his field. This is the plus I was talking about above. But there is a large minus as well—spare parts, which have become very difficult to acquire.

Another way of acquiring equipment is a dedicated order for its development especially for the needs of the sector. A radio-cable apparatus for gas pipelines has been created in Hungary and radio-transmission systems in Finland, while the dedicated-purpose Tral K-12+12 24-channel radio-relay transmission system, among others, has been developed at the Ministry of the Communications Equipment Industry. All of this equipment, although it was developed for the gas industry, is also suited for other transport sectors with long electrical-communications lines. It turned out that we were blazing a trail for the workers of allied industries when we were the sole users of it. And whereas USSR Gosplan had allotted us 1.5 million rubles for acquiring it, due to the sharp increase in the number of users our "subsidy" has been reduced to 300,000 rubles today.

[Monina] But there is an Interagency Coordinating Council (ICC) which has as one of its basic tasks, as I understand it, determining the needs of the sectors for communications equipment and helping them to get it.

[V.I. Leonov] The ICC unfortunately does not have that function. It is not occupied with production communications or its needs at all. All of its activity is coordinate-restrict-prohibit. We coordinate all of our design-engineering targets with the workers of the ICC, and they determine what "extra" channels we have and that we must transfer free of charge to the Ministry of Communications (while we pay no small amount of money to lease channels from Minsvyaz), and moreover if those channels go out of service for any reason, we have to pay Minsvyaz for their idle time. Even with our own developed communications network we have no rights in its development.

[Monina] But that is probably caused by the need to observe a unified ideology for the development of communications equipment in the country. It is just incomprehensible why there is as yet no sole master of production communications that would coordinate the thousands of questions with dozens of agencies, would pursue the state policy of development of production communications and would provide the most modern equipment for all sectors. Why is there no unified planning institute for production communications that would halt the redundancy in developments scattered among several communications departments of a multitude of sector planning and scientific-research institutes? These are still rhetorical questions without an address. But a shift is possible here. It has become known to me that an initiative group of specialists in production communications has been organized that has come forward with a proposal to create an association of consumers of communications services on a shared-participation basis whose chief mission would be to improve sharply the communications situation in the country. Vladimir Ilich! Do you know about that idea, and what is your attitude toward it?

[V.I. Leonov] Yes, I am up on the proposal of several ministries to create such an association. I was even present at one of the two meetings dedicated to this issue. There are as yet no clearly formulated principles for the activity of such an organization or its status, capabilities and rights, however. There is just a list of initial data for evaluating the possibility of creating departmental communications systems. But that is clearly inadequate to determine our attitude toward the possibilities for participation. I am more troubled today by the imperfect nature of the organization of sector communications management in the gas industry and the attitude of the workers of basic production toward the communications workers.

[Monina] What do you have in mind?

[V.I. Leonov] We have a unified communications system, but we have no unified administrative control structure. None of the production associations has its own communications administration, and half of them have departments and services that are administratively subordinate to the gas workers, whose interests and tasks are completely different. This fragmentation of the communications workers and the imperfections in their management structure are hindering the systematic resolution of the question of automation. And ultimately slowing the development of communications in the sector.

[Monina] And why has the attitude of the specialists, the gas workers, changed toward you, the communications workers? What is that connected with?

[V.I. Leonov] First and foremost with money. Before, when we received our wages depending on the work of the gas workers, everything was fine, we were secondary. With the conversion to economic accountability and

self-financing, we communications workers have been able to improve our pay system, i.e., we have begun to receive money for our own basic activity—the quality of operation of communications equipment—that is, we have left the pay system of the gas workers. This has caused great dissatisfaction in the local areas, since the stable progressive pay scale of the communications workers for uninterrupted and high-quality communications gives no rest to some of the workers of basic production. They are ready to dissolve the communications administration altogether, as discussed in letters coming in to Mingazprom over the signatures of the labor-collective councils, i.e., this opinion is not isolated but is held by whole collectives. But the fact that people do not notice how the communications are operating speaks for itself. This means they are so fine-tuned and high-quality that it is perceived as going without saying. That is how it is. The example of Armenia alone is proof of that.

[Monina] What do you have in mind? Please explain your thinking.

[V.I. Leonov] It is all very simple. Our channels, the operational-communications channels of the gas industry, were the first on which communications were established from Spitak to the outside world, and our communications workers were the first into the disaster zone: from Astrakhan on the third day after the earthquake, later from Smolensk and Ukhta, while the communications workers from Kiev organized fixed radio communications between Yerevan and the damaged gas-distribution stations in the disaster zone. After such coordinated actions by the communications workers of Mingazprom, USSR Deputy Minister of Communications G.G. Kudryavtsev requested that we share our experience in organizing communications under extreme conditions for the purpose of creating a special subdivision for the restoration of communications equipment damaged as a consequence of a natural disaster or accident.

[Monina] It turns out that a lack of understanding of the role of communications in the sector is giving rise to calls for regression. And that in the age of automation and computers!

Thank you for this discussion, Vladimir Ilich, and I hope that it will assist the gas workers in understanding the significance of communications in their sphere of activity. The more so in a sector where hundreds of thousands of gas and communications workers are operating with just 9,000 people ensuring the functioning of 111,000 kilometers of communications lines and 601 communications centers filled with equipment. An underestimation of the role of communications in the sector is impermissible at any level of management, the more so in such a technologically crucial one as the gas industry. Examples exist of an irresponsible attitude toward inspection and monitoring apparatus using communications equipment. We will not increase the number of them.

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Oil, Gas Industry Database Planned

904F0025A Moscow NEFTYANOYE KHOZYAYSTVO in Russian No 10, Oct 89 pp 3-6

[Article by S.P. Vartanov and V.P. Shcherbakov of USSR Minnefteprom [Ministry of the Petroleum Industry] GIVTs [Main Computer Information Center] and R.V. Strelakova and S.A. Shirin-Zade of VNIIBT [All-Union Scientific-Research Institute of Drilling Techniques]: "The Question of Creating Sector and Regional Databases"]

[Text] Automated systems for processing documents on well drilling for the purpose of composing reports within the associations are being developed or already exist in the majority of the Group Computer Centers (KIVTs) of the associations and other organizations of USSR Minnefteprom. Software and equipment have been developed for transmitting reports approved by USSR Goskomstat [State Committee for Statistics] to the Main Computer Information Center (GIVTs) of USSR Minnefteprom. The enormous information resources on the technology of well drilling are being utilized in integral fashion for composing the state reports, however, and are effectively not performing technological, management, forecasting or economic-planning tasks. A scarcity of information is moreover being felt at the territorial institutes of the sector (NIPi [scientific-research, planning and design institutes]), as well as at VNIIBT as the lead organization for well construction.

The streams of information coming into the NIPis and VNIIBT differ in composition, form of documentation and purpose. They include official report forms coming from drilling enterprises to higher organizations, documents, records and logs of tests of new drilling equipment and technology, cumulative logs on drill-bit wear, and information on the geological sections of tectonic structures and the structure of areas obtained by the staff members of the institutes on special data-acquisition trips. Some territorial NIPi information on drill-bit wear can be obtained from the KIVTs on paper media.

The subdivisions of institutes, making use of various sources of information, constitute information subsystems for various purposes, both using and not using computers. The arrays of information stored at those subdivisions differ in composition and structure. They are moreover not complete, and joining them together may not provide all of the information essential to the academic activity of the institutes. Organizational support for the receipt, acceptance, monitoring and updating of the information is as a rule not envisaged. The data overlap, which leads to surplus expenditures on acquiring, processing and storing the information. Access to the computer-stored information by telecommunications equipment is lacking, which leads to the

fact that the systems, due to the absence of an opportunity for direct inquiries by the user, begin to envisage the issue of excess information "for every eventuality."

The lack of the timely provision of trustworthy and high-quality information for the institutes at the region and sector levels reduces opportunities for analyzing technical and economic indicators, while the analysis of insufficient information or an insufficient quantity of it could lead to incorrect conclusions relative to the effectiveness of utilization and directions of development of drilling equipment and technology.

It should be taken into account that information is considered around the world to be a more and more valuable resource, just as important as human, raw-material or financial resources.

The high-quality performance of tasks in processing and utilizing information in the academic and design-engineering activity of institutes is possible through the creation of regional and sector databases on a unified programming and methodological basis with the exchange of information among them and telecommunications access to it. The figure shows a diagram of an automated information system in drilling [not reproduced].

The databases created at a KIVTs, in light of the fact that various organizations are engaged at various times and for various purposes in the development of automated systems for the acquisition, storage and processing of information on well drilling, were realized with the aid of various database management systems (SUBD) that differ in the set of particulars and, as a rule, use the classifiers of the enterprise. The opportunity of a gradual standardization both by subject field, data array, particulars and classifiers, as well as by the software used, exists nonetheless. Practically all of the KIVTs have communications channels with the GIVTs of USSR Minnefteprom. The creation of a shared sector database on well drilling at the GIVTs should thus be the foundation of the future standardization of the composition of the databases, hardware, software and systems support in making corrections to the regional databases.

VNIIBT has currently developed a plan for the first phase of a sector well-drilling database based on the computers of the GIVTs and with its direct participation. A remote display station with four display screens and a printer has been installed at VNIIBT. The KIVTs of Grozneft and Kuybyshevneft have been selected as the base enterprises possessing regional databases.

Repeated discussions were held with the future users of the database in the course of determining the information consumers of the institute's subdivisions and in the process of analyzing the data. The subject areas for the automated database for well drilling (ABD-Drilling) essential for NIOKR [scientific-research and experimental-design operations] at VNIIBT both now and in the future were uncovered. Those subject areas are: the technical and process conditions and indicators of well

drilling; the geological sections of tectonic structures, fields and wells; the administrative structure of sector and drilling management; the assortment of drilling equipment produced; and, plans for well drilling.

Four areas for the first phase of the database were determined as the result of research in this stage.

The classification of data-processing systems allows the delineation of the following types of decisions: operational, tactical and strategic.

The operational decisions include the issue of concrete information on the operation of drilling equipment and drilling indicators for various spheres of activity of Minnefteprom. The tactical decisions include statistical evaluations of the effectiveness of the means and methods of drilling, comparative evaluations of the operational efficiency of drilling equipment, expert analysis of plans for the construction of wells, the modeling of processes and the devising of design-engineering solutions. The strategic decisions include tasks in the long-term development of drilling equipment and technology.

The operational and tactical decisions require the largest arrays of information. The traditional approach to managing such data was to specialize with decision-making at each specific level, but that has its drawbacks, namely: too many applications programs are created for the performance of one and the same file-handling operations (data sets) in various file systems (data set presentation systems); a contradiction exists in management and systems developments as well, since they are done by various individuals and groups of individuals using their own data (in composing procedural programs for well deepening, procedures for drilling wells or evaluating the effectiveness of new drilling equipment and technology, for example); files developed for special applications programs cannot be used to satisfy inquiries for information that cover two or more areas of subdivision activity; and, traditional data files do not provide for the satisfaction of inquiries for reports in cases where the essential elements of the data differ from file to file according to the code used, timeliness or degree of detail. It should be noted, however, that only a small number of the subdivisions of VNIIBT and the NIPs have even the traditional file system at their disposal.

An analysis of the requirements of the majority of the subdivisions of the institute shows that inquiries are made first of all for operational data, since the institute does not have practical experience in working with information in automated mode. It must be noted in evaluating the future needs of the institute that the need for data for solving problems at the tactical and strategic levels will grow to the extent that experience is acquired in working with the database. The importance of the data for operational decisions will not be diminished therein.

A quite complete and accurate picture of all the data-processing processes for well drilling at the subdivisions of the institute was obtained after the completion of an

analysis of the needs of NIOKR there. Entities of interest were identified based on it, a name selected and a list of attributes compiled that were subject to storage. The attributes that could be employed as the key to the entity and the interconnections among entities were delineated as well. Requirements for the streams of input and output information were composed, the data-processing processes were formalized and classifiers for the delineated entities were created along with dictionaries of process operations.

The formalization of the data, performed in the analysis of information descriptions, made it possible to overcome the lack of homogeneity in the verbal descriptions. A modeling of the data by delineated subject field was performed as a result. The common entities were revealed and discrepancies—when one and the same term had meanings that differed in sense—eliminated in the integration of the representations by subject fields. There were not that many discrepancies in names, however, since the dictionaries of the entities and their traits that were compiled in the stage of requirements analysis were used. Bits, for example, are divided in practice into roller and diamond bits, although these properties relate to various particulars, as the word "roller" describes a type of bit design (the word "cutting" could correspond to it) while the word "diamond" describes a type of bit reinforcement, etc. Very many such incongruities at the level of entity classifiers were eliminated, which simplified the modeling of the data.

A conception of a database was thus constructed that provides for a stable system of coordinates where new entities, attributes and interconnections can be inserted. The equipment and capabilities of the Spektr SUBD, which has been adopted at Minnefteprom as the foundation for regional and sector databases, were the basis for the physical design of the logical database. The Spektr SUBD, out of all the commercial SUBDs for the description of higher logical databases currently in existence, in reality most completely ensures the achievement of the goals posed above in planning the physical database.

The use of databases of sector classifiers, a unified SUBD and contemporary equipment in regional and sector databases will make it possible to solve the problem of planning distributed databases, eliminate the scarcity of information in performing scientific-research, experimental-design, economic-planning and management operations and set up a system for the exchange of data among the various oil-producing regions of the country.

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ELECTRIC POWER GENERATION

Decentralization of Energy System Discussed

904E0024A Moscow SOTSIALISTICHESKAYA
INDUSTRIYA in Russian 26 Oct 89 p 2

[Article by M. Khodzhaev, director of the Scientific Research Institute of Energy Conservation, doctor of Economic Sciences: "Who Is Calling the Tune?"]

[Text] In the general principles for perestroika of the leadership of the economic and social sphere in the union republics on the basis of expanding their sovereign rights, self-government and self-financing by the most comprehensive manner, submitted for national discussion and presently being reviewed by the USSR Supreme Soviet, there is, very likely, a division of the functions between central and local organs of authority for management of electric power projects.

Our country has achieved the highest level in the world with respect to the scale of centralizing power supply capacities. Is this good or bad? At present, over 90 percent of all the electric energy in the country is produced and distributed by the USSR Unified Electric Power System, directed from the Central Dispatcher Control. The development of the electric-power engineering industry is almost completely financed from the all-union budget. It would appear that with this degree of centralized power supply, of which we have constantly boasted and, it appears, are still boasting, there is no need for perestroika of the structure that has been formed to control the raw energy sources.

Practical experience has shown, however, that this need has long existed. Steps in this direction should obviously be taken in accordance with regional interests and the USSR Law on the State Enterprise. The point is that often the fruits of the optimal decisions of the central organs on the development of the raw energy sources has not proved to be optimum for individual regions. This most often happens because of the imperfection of the decision-making mechanism and the failure to take many ecological factors into account.

We know that the raw-power sources in a number of regions of the country are the main sources of environmental pollution. Therefore, it is not surprising that carrying out specific power engineering projects on the statewide and particularly on the regional level is connected with the arising and widescale activity of a large number of ecological groups.

Recently the dissatisfaction and open protests of the population against the construction of nuclear, hydraulic and large thermal electric power plants based on low-grade coals have become a mass phenomenon. What is the reason for this attitude? After all, it is only recently that local organs of authority themselves appealed to the Center with insistent requests and proposals to build these very electric power plants on their territory. There are several reasons for this. In the first place, in the

course of perestroika, public activity and glasnost have risen sharply. What was formerly discussed in a narrow circle of functionaries and technocrats, has now become the subject of open discussion at public meetings and on the pages of the press. The fatal accident at Chernobyl has played no small part in arousing the negative attitude of a large part of the population toward power engineering projects, particularly toward AES. In the second place, everyone knows that the major electric power plants have actually not had the best effect on man's habitat. There have never been, are not and so far will not be created any absolutely clean electric power plants. It may be a question only of maximum neutralization of their negative effect on nature. Finally, and particularly noteworthy, is the fact that the people are well aware: if they block the construction of an electric power plant in the region where they live, the state will still not leave them without electric power—it will be transmitted from other regions.

Due to the systematic disruption of the introduction of new power capacities and the obsolescence of equipment, a very tense situation has formed with respect to power supply, not just in one, not just in two, but in many regions of the country. This means that there is an urgent need to accelerate construction and put into operation new electric power plants, but because of this there is nowhere to put them and it cannot be brushed aside....

Naturally, the scales of development of power engineering and the problems of its territorial allocation are solved from the general state standpoint, based on the natural-geographical conditions and many other factors, specific to individual regions. The ultimate goal of these solutions is to provide a full and reliable power supply for the national economy, with minimum expenditure. At the same time, however, it is certainly necessary to coordinate general state and regional interests carefully. In the meantime, unfortunately, no mechanism has been worked out to coordinate these interests. The regions which have more favorable conditions for the construction of major electric power stations and therefore have the potential not only for fully covering its own needs for electric power, but also for transmitting it, as compared with the power-short regions, are proving to be placed at a disadvantage on both their ecological and socioeconomic plane.

At present, the ecological damage from power projects for a given region is virtually uncompensated. Therefore, the inhabitants of energy-abundant regions, particularly those feeling a shortage of labor resources, are clearly not interested in the development of "dirty" production facilities.

For example, it is considerably less expensive to produce electric energy in Krasnoyarsk Kray than in neighboring Altay Kray. Despite this, however, the inhabitants of Krasnoyarsk pay as much for the energy used as they do in Altay, the Urals and in the European regions. On the new price list to be introduced beginning with January

1990, the rates for electric power established by Goskomsen are identical for all regions, with the exception only of the Far Northeast, Sakhalin and Kamchatka.

What is the way out of this contradictory situation? The problem can of course be solved by the "power" method, tested for decades. This approach, however, as practical experience has shown, does not yield the desired effect. There must be economic levers of management here, to interest the population and the local authorities through certain benefits.

Construction of large electric power plants is of interregional importance, and henceforth will still have to be carried out through centralized financing sources, even though their construction does not rule out proportional participation of the republics, krays and oblasts. In order to interest regions in locating these electric power plants on their territories, the entire sum of payment for land, water, labor resources and a substantial proportion of the profit (income) obtained from selling the electric energy should be withheld in the incomes of the local budget. A large portion of these funds should be directed toward developing the social sphere in the given region. Moreover, to create mutually advantageous relations among the regions, it is expedient to introduce flexible differentiated rates for electric power, specifying lower amounts for these rates for energy-abundant regions. This is very important.

The plan for the general principles specifies that the management of the sectors of the fuel-power complex be retained by the Center. The transfer of only individual enterprises and workers, mainly for the needs of the region, is intended to be under the jurisdiction of the republics and the local Soviets.

In the electric energy service, however, the problem of the boundaries of the division of functions between the USSR Ministry of Power and Electrification and the regional authorities, in view of the great variety of local conditions and the varying degree of readiness of the republics and local authorities to accept these functions, cannot be solved unequivocally. In some cases, the transfer to the republics (oblasts) of only the distributing electric networks in the cities and rural locality, as well as small thermoelectric centers and hydroelectric plants including the electric networks of enterprises, is acceptable. In others it will be expedient to transfer the entire electric power service to local authorities, leaving for the USSR Ministry of Power and Electrification the inter-system electrical networks and intermediary functions in the interrelations between the republics, krays and oblasts. These interrelations should be based on contractual principles that most completely answer the principles of self-government.

It appears that perestroika should be mainly directed toward the further development of horizontal relations between the republics on this precise contractual basis and toward creating qualitatively new forms and relations among the regions. The USSR Ministry of Power

and Electrification should be assigned only the functions that take into account the priority of general state interests, the fulfillment of which cannot be realized on a regional basis.

Chernobyl Union Creation, Functions Described

904E0024B Moscow IZVESTIYA in Russian
30 Oct 89 Morning Edition p 1

[Interview with L. Khitrov, chairman of the Ispolkom, by V. Zaykin, IZVESTIYA correspondent: "Why Was the 'Chernobyl' Union Created?"]

[Text] A new public organization has been created in the fund of USSR inventions—the Chernobyl Union. An IZVESTIYA correspondent met with L. Khitrov, chairman of the ispolkom (where people participating in cleaning up the accident at the ChAES go).

[Zaykin] Lev Mikhaylovich, what goals is the Chernobyl Union setting itself?

[Khitrov] We clearly realize: so far attempts to find an alternative to nuclear power have been a failure. The union is coming forward to make it maximally safe and eliminate any possibility of an accident. Selecting AES designs on a competitive basis, and constant public monitoring during construction and operation of the nuclear projects—that is what we need today. We could (and right now we are deciding how to put this into practice) equip, using the union's money, a commission of independent experts at existing AES.

The safety of nuclear power engineering is just one direction of our activity. Another very important task is social protection of people who suffered as the result of the accident at the Chernobyl AES: those whom it eliminated and those who lived or are still living on "contaminated" territories. All of them need skilled medical service, and need material support and legal protection. Panicky fear of nuclear power is just as dangerous as an unconcerned attitude toward it. Therefore, we are planning to organize all-union, universal education, so that people are guided in their actions not by emotions, but by knowledge. Today the union consists of regional organizations from Moscow, Leningrad, Belorussia and the Ukraine and separately—from Chernobyl. A similar organization has arisen independently from us in Lithuania. We are establishing contacts with it.

[Zaykin] Where will you get the money to carry out your programs?

[Khitrov] We are mainly counting on donations from state and cooperative organizations, as well as from individuals. The USSR fund for social inventions has already transferred about 100,000 rubles to our account.

[Zaykin] What will your interrelations be with people who, outside of a connection with the Chernobyl catastrophe, have experienced the physical or psychological effect of ionizing radiation? After all, there are many of

them—workers at nuclear projects, servicemen, inhabitants of rayons bordering on nuclear polygons. Who will protect their interests?

[Khitrov] We are taking everyone under our control. We are creating a data bank for this. In general, any citizen whose aims are close to our organization can become a member of the union. The postal address of the Chernobyl Union is 129010, Moscow, subscriber box 17. In the Krasnopresnenskoye Division of Zhilsotsbank the account is No 1700565, and at the USSR Vneshekonombank the account is No 70800003.

Consequences of 1957 Accident in Urals Detailed

904E0024C Moscow SELSKAYA ZHIZN in Russian
1 Nov 89 p 3

[Article by R. Budrina, SELSKAYA ZHIZN special correspondent: "The Ural Trace"]

[Text] Thirty years ago there was silence about this event—merely because this misfortune happened in a "closed" city. Recently it was shown on television, and a Japanese delegation was invited there.... There is no need to explain what has changed. Let us think about how dearly this silence has cost us.

He Saw a Nuclear Fire

Autumn. The birches are shedding their leaves, preparing for sleep. The grass is still green, but stiff and cold with autumn. The sky is blue, and in the distance are mountains. The Urals. Now this is a prohibited place, guarded by the invisible line of the radiation trace of the Urals. Thirty years ago there was a peaceful autumn just like this....

"I was in the fields. Suddenly it was as if a second sun had risen: from the direction of the closed city rose a column, just like in the movies, and then a tremendous glow...." recounts Vasily Fedorovich Zhabreyev, former chief agronomist of the MTS [machinery-tractor station] of Bagaryanskiy Rayon in Chelyabinsk Oblast, abolished after the explosion. "The tractor driver and I thought that some sort of tests were being made. So we worked until the end of the day. In the winter they called me in to the chief and, after taking a signed statement not to divulge the secret, they informed me that at that time, in the autumn, there had been a nuclear explosion. They asked me to calculate how many people and tractors would be needed to plow up the whole area where the cloud had passed. They gave me even more than I asked for. We dealt with the plowing over until 7 May. All the tractor operators and I were examined by medical men. I fell ill. They said—it was brucellosis.... They began to evacuate people from the surrounding villages. The resettling went on from the autumn of 1958 to the spring of 1959. They gave the people money and they went in all directions. Whoever had no place to go they settled in other rayons, in little Finnish-type houses, built especially for them. Ten years later we used the pasture land up to the Bagaryak river with no restrictions. The forest

suffered greatly from the radiation. On the other hand, the grass grew as it never had before."

And the people? According to the recollections of G.V. Bednyagin, another local resident, some of them could not bear resettling—they committed suicide. They could not understand why their homes had been destroyed, the church had been blown up and the animals shot.

Now, thirty years later, we have realized that a great deal was done in vain. It was not an experiment. Gennadiy Vladimirovich Bednyagin is now working as director of the oblast chemicalization station. He showed me the little card, until recently secret, but now open, on which radiation language marked out with a black stripe the place where medical men and radiologists, soil experts and chemists, physicists and veterinarians had been making inspections for thirty years....

Thirty Years of Heroism

I had a schoolmate. He was cheerful, likable and intelligent. He early became a doctor of sciences, and in the last few years directed a division at the central institute. Suddenly—a brain tumor, an operation, a fight for life... we are burying Tolya Kogotkov. I remember someone saying that he "got a dose" in the Urals. I heard his name mentioned here at Chelyabinsk, where he worked on the Ural radiation trace. A toiler and an experimenter, Anatoliy could not be too careful or prudent. He burned himself out. He was not the only one, of course. Everyone who worked here, who went along the brink of the abyss, deserves admiration and gratitude. Unfortunately, their names and their work were kept secret until now.

This unique, though sad, experience, so necessary for the people to know, was kept hidden under a bushel. In 1973, under the strict stamp "For Official Use," the "Recommendations for Carrying Out Rural and Forest Management With Radioactive Contamination of the Environment" were issued with a circulation of 2500 copies. It is a book, which, when building nuclear power plants and using radiation methods in the national economy, should have been circulated in millions of copies and studied in schools. Plant growers, for example, would be interested in learning that grain crops retain radionuclides in an amount one fourth that of sugar beets, and one third that of potatoes, and this difference increases right up to their commercial ripeness. Special coefficients can help specialists to link the concentration of radionuclides in products with the density of contamination in the territory.

The book also has recommendations for deactivating facilities, soil and products, and processing food products. Problems of feeding cattle which have got into the danger zone are given a special place.

Why, then, was such useful information issued with a modest circulation and indeed even kept secret? After all, by having this information, agronomists and livestock specialists in the Ukraine, Belorussia, Bryansk

Oblast and the entire area of the Chernobyl catastrophe would have made fewer mistakes, taken fewer risks and had fewer losses.... True, they say that popular brochures were issued, but who kept track of seeing that they ended up where there was a danger of radiation trouble?

Then Chernobyl Burst Out....

We were all morally unprepared for this, had not watched for mistakes and had not foreseen radiophobia.

This state was termed "cave-man uninformedness" by one of the speakers on the platform of the All-Union Congress of Radiobiologists. How did it turn out that, having experience in conducting agriculture in a radiation zone we had not studied, had not used it? Chelyabinsk specialists did not get to the site of the catastrophe immediately, they got there in order to put right others' mistakes, made from ignorance. Only on 30 June 1989 (!) did the Public Information Center publish data "On the Accident in the South Urals on 29 September 1957." If this publication had turned up sooner, how many specialists would it have warned against carefree euphoria about the "tamed atom"? What to do with the pastures, orchards, kitchen-gardens, herds and forests would have been clearer. It is improbable, however, that had this information reached Chernobyl, the calamity would not have happened there. After all, there were only a thousand (!) copies of the bulletin in circulation.

Right now, scientists from Chelyabinsk visit Mogilev Oblast now and then. Robert Ivanovich Pogodin, deputy director of the Chelyabinsk Branch of the Institute of Biophysics of the USSR Academy of Medical Sciences recently returned from there.

"It is still impossible to live in many villages—in Malinovka, Novaya Yelna and in the entire Kostyukovichskiy Rayon in Mogilev Oblast. There are places that cannot be returned to."

We have little foundation for our radiophobia. After all, an ordinary TETs emits substances a hundred-fold more hazardous for life than an efficiently operating AES. We have a grudge against radiation, because we fear it, and we fear it because we do not know.

This is true. In our atomic age, a knowledge of radiation must be given to a person from childhood and mastered at school with the same alacrity as computerization. Will we eventually get into the swing of things?

At an experimental scientific-research station studying the Ural trace, on the night before all its achievements were demonstrated to Japanese guests, they refused me, a Soviet journalist, information.

"Apply to the Minister of Atomic Power," Gennadiy Nikolayevich Romanov advised me, "Without his consent, I cannot violate the vow of silence."

And so, even with glasnost, the sphere of radiobiology is so far tightly closed. This will cost dearly not only those

who have suffered or can suffer from ignorance, but also the Ministry of Atomic Power itself.

Confrontation

The Chelyabinsk House of Political Enlightenment. The ninth auditorium. Scientists and nuclear scientists and their opponents, public-spirited persons of Chelyabinsk Oblast—gathered here on the eve of a municipal meeting. The point was that today they are building the South Urals AES in a bright birch grove, which guards the secret of the Ural trace. Is this not too much for the long-suffering, ecologically exhausted oblast? At this debate of the scientists and citizens of the town, the latter's accusations of incompetence now and then crept in. Of course, it is easier to accuse than to enlighten. The scientists enlightened, as best they could, for the two hours of the debates. It turned out that the reactor is necessary. Well, if not for heat (it will not provide it), then for insurance against an ecological catastrophe. It appears that during the years of working at one of the swamps near the closed city, such "wastes" were released that, by neglecting them, you get three Chernobyls—from Chelyabinsk to the Arctic Ocean—for the Techa River flows into the Iset, and the latter—into the Tobol and the farther, the more. These are the predictions.

Is there a danger of wastes? How do you secure the transport of radioactive freight? All these questions, of course, worried the Chelyabinsk citizens, even the enlightened ones. A meeting the other day required a referendum. The newspapers CHELYABINSKIY RABOCHIIY and KOMSOLETs were included in the discussion, and it became clear that construction of the AES was the initiative of those who lived and worked in the closed cities, but now do not want to leave the Urals. Upon conversion, their production facilities will close, and they will be looking for work. Who thinks about the fact that there is no way that contamination can be any worse in the Ural land? Here there is metallurgy and the chemical industry and the Ural trace and the "wastes" of the military-industrial complex.... It is hard to breathe in the cities, the water is bad, and the land is contaminated. How do the people live there? With hopes for the AES? It will add to the ecological worries, though, no matter how much specialists praise it. After all, for a long time they have been in the habit of writing two things and having eight on their mind.

We have indeed paid dearly and now we will pay for not taking proper care of the heap of wastes in the closed city in the South Urals. This carelessness has turned into billions in thirty years. Right now we have not paid the bill for Chernobyl. What next?

Helicopters Used To Inspect Power Lines

904E0024D Kiev PRAVDA UKRAINY in Russian
12 Oct 89 p 4

[Article by V. Chalyy, associate of the Gorlovka newspaper KOCHEGARKA: "An Air Lineman: A Helicopter

Service with Thermoviewer Control Ensures Trouble-Free Operation of Electric Power Transmission Lines"]

[Text] Reliable equipment installed on board a helicopter has replaced the tremendous staff of specialized linemen, who can visually, "with their eye" determine possible damaged spots on electric power transmission lines.

A U-turn—and the helicopter goes off on patrol. Next to A. Antonov, test pilot of the Donetsk United Air Detachment, is V. Chernov—chief of the Thermoviewer Control Laboratory of Donbassenergonaladka, which is in Gorlovka. The "eyes" of the thermoviewer of the Swedish Adema firm see thermal radiation from electric power transmission lines, transformers, heating lines, cable lines and tanks containing corrosive liquids. For example, the laboratory received an order to inspect the condition of a reservoir of ammonia at the Gorlovka Stirol Association.

Installed on board the helicopter, in addition to the thermoviewer, are two videotape recorders to record the actual picture, monitors, and a control panel for video-cameras. They are fastened outside on a special box, filled with liquid nitrogen for cooling. Engineer A. Boyko monitors the control of the "hyperboloid", as the unit with the video cameras of the thermoviewer itself is called. The third member of the crew—O. Alifirinko—operates the instruments.

The side of the 15616 goes out to the line. The speed is 70 kilometers an hour. A precise picture of the anchor support and the line itself appears on the monitor screen. In the center of the screen is the square of the thermal image.

"You see the information on the insulators," V. Chernov talks to me on the communications link, "this is the heating. Everything here is normal right now. When there is a difference in the temperatures of the line and contacts we determine the places where the defects are. Visually—according to the monitor, but we decipher the thermogram completely in the laboratory—on a computer."

The effect of using the thermoviewer control equipment is tremendous. For comparison they quoted only two figures to me: examining the line using the ordinary method takes two or three days, but with a helicopter and instruments—one-and-a-half hours. The laboratory inspects about 3000 kilometers of electric power transmission lines in a year.

The geography of the laboratory's work is quite extensive. Immediately after the accident, it had to "measure the temperature" of the reactor of the fourth unit at the Chernobyl AES. At that time Chernov and his crew were working under the direction of the famous scientists Velikhov and Legasov. Today they were to check three lines. They managed, however, to monitor a few more: seven defects were discovered. Decoding the thermograms will show how serious they are.

In the meantime, the helicopter is touching down smoothly. The instruments are turned off and removed. The equipment for it was manufactured in the laboratory. Even a respected foreign firm could not suggest anything better than to carry out the inspection through the open door of the helicopter. This is inconvenient, and in winter, in addition, it is cold. The Gorlovka engineers wracked their brains to improve the imported wonder equipment. It turned out all right.

The air linemen fly out on patrol practically every day. The helicopter makes two circles over the roofs of their home Energonaladka. This signal means—"we have come home." Immediately a car rolls out from the gates. It goes toward the village of Mikhaylovka, which is near Gorlovka, where on the field of the former airport the helicopter landing pad for the power engineers is sheltered. In about ten minutes the car reaches the engineers, who are engaged in "deciphering" the thermogram.

Debate over Preferred System of Power Generation Continues

Nuclear Energy Plus Closer Monitoring

904E0011A Moscow MOSKOVSKAYA PRAVDA in Russian 5 Oct 89 p 4

[Article by A. Kolesnikov under the rubric "Science: AES Safety": "A Nuclear Renaissance, or the Crash of Presumptions of Infallibility"]

[Text] An eminent scientist stated at a conference not long ago that the real harm from nuclear power power was its insufficient utilization. That view predominated as recently as three or four years ago. The dangers of nuclear power plants were ignored in a carefree manner, or rather were simply not mentioned, and if they talked about it at all, it was at best about the problem of burying radioactive waste.

But then Chernobyl happened, and the epithet "nuclear" has now nearly begun to cause allergies.

They say that between two extreme points of view lies not the truth, but a problem. Is there a problem here? Obviously there is, and not just one.

Searches for Alternatives

The desire of people who had once been in a car accident never to get into that car again is understandable. Those who think most radically begin seeking non-traditional means of movement after such an accident—and it is not ruled out that they will re-invent the bicycle. The most impressionable will say that you have to walk and get rid of auto transport.

After the Chernobyl catastrophe it became clear that the presumption of infallibility in nuclear power engineering was a myth. Mistrust arose toward it. And a maze of questions.

First of all, is there an alternative?

Yes, so-called non-traditional sources of energy exist. True, they are somewhat akin to the "non-traditional" method of conveyance—on a bicycle. Five millennia ago, the heat of the sun and the power of the wind were a means of supporting life. And today we are discovering them once more anyway. Discovering them with hope. We are trying to adapt them to the solution of today's no less serious problems. We have, you could say, a genetic trust in these sources of energy. And now that we have seen them again, let's look at them attentively.

When they say "alternative sources of energy" they have in mind, of course, their real ability to counter today's, first and foremost in capacity, safety and cost.

"There are an awful lot of discussions of solar power today," feels USSR Academy of Sciences Corresponding Member L. Feoktistov. "And they often portray its production as something completely harmless. Is that so? In order to obtain energy from the sun equal to that generated by one power unit of a nuclear power plant, we would have to cover seventy square kilometers of the earth with receiving devices. That means that from the instant of the commercial production of solar energy, the ruin of the established natural climate would begin; after all, 'pumping out' energy leads to a drop in temperatures of an average of ten degrees in the places where the solar facilities are located. Ten degrees! Those who talk about the broad-scale utilization of solar power must think about that some. If we also take into account the enormously expensive nature of the devices, we can scarcely classify this method as an alternative."

There is another source—wind power. It is unfortunately very expensive once again, and not very efficient either.

"All energy sources have a full right to exist," feels the deputy director of the Nuclear Power Institute imeni I.V. Kurchatov, S. Khakimov, "—solar power, tides, wind, geothermal—in some regions you can't get by without them today. I am sure that in the future multi-institutional power engineering will be operating with the most diverse of sources, including in capacity. Energy conservation is also essential therein and is being sought in two ways. First is technological breakthroughs, a search for a system of energy-conserving solutions. Second is traditional, intrinsic energy conservation. It is well known that we have today a considerable overproduction of intermediate products. We produce five times the ore of the United States, five times the tractors and four and a half times the machine tools! We produce less electric power but consume more. Three and a half times more, for instance, in agriculture. On the other hand, labor productivity is five times lower..."

A professor at the Academy of the National Economy of the USSR, V. Danilov-Danilyan, feels that the ultimate useful output could be obtained with half the production of intermediate products with modern technology, the correct organization of labor and other conditions that should be created by restructuring. And that means that

there are ten to fifteen thousand excess industrial enterprises in the country consuming enormous quantities of electric power.

The problems of nuclear power engineering are thus the problems of restructuring the national economy, and those who were convinced after the Chernobyl tragedy that we can and must dismantle nuclear power in no time will clearly have to be reconciled to that.

The Wind Knocked Out

And so, there is no effective alternative source of power today—that is on the one hand. On the other hand, the current state of nuclear-power engineering cannot be deemed satisfying, in one day shattering our euphoric notions of the inoffensive and mighty nuclear reactor or, as it was sometimes reverentially called in the fifties, "the sun on earth." What knocked the wind out of the heroic organism of nuclear power?

"The first successes connected with the use of nuclear power for peaceful purposes caused a feeling of complacency among scientists," feels L. Feoktistov. "The successes soon led many of us to the idea that the problems of the AES had now been solved. Even I.V. Kurchatov was saying that it was time to switch the main efforts to thermonuclear power. And this area did not receive the necessary scientific support and was deprived of many serious physicists. Nuclear power was meanwhile developing at a rapid pace, the construction of AESs became systematic and the euphoria grew stronger while the grounds for it disappeared."

They whipped kilowatt after kilowatt from the reactors, even from designs that had been created as experimental. The supreme mission was lost and the technology was only improved, there was seemingly no need for profound scientific creativity. It began to become widely circulated, and if not doomed to catastrophe, then ready for it.

Are the scientists responsible for what happened? Yes. Academician V. Legasov felt that the scientists had long been dazzled by the technology. Unadorned technology. And the main problem is that the high-quality, mighty and fundamentally new technology that the country was proud of and that finished with the flight of Yuriy Gagarin was created by people instilled with profound moral feeling both toward each other and toward the technology. And now in subsequent generations, the academician was convinced, many engineers brought up on the principles of technocracy proved just able to circulate the technology but not to create anything fundamentally new.

I think that the loss of a moral attitude toward nuclear power is no less terrible than the overt use of the principles of physics for the annihilation of people. Since the result of the rampant cynicism and a naive lack of an ethical attitude toward the technology is one and the

same—an explosion. The nuclear power plants do not suffer excessive familiarity. Or else they do it for the time being only.

And what of the scientists? What does an awareness of the ethical responsibility for the results of their work mean for them?

A New Philosophy

Nuclear power engineering, many scientists feel, is in need of a new philosophy that would permit the creation of new types of reactors. Whereas before the problem consisted of protecting a potentially dangerous reactor from an accident, today those principles of physics with the aid of which the reactor itself will be capable of such protection must be found.

"The possibility of creating such reactors exists," says the deputy director of the nuclear-power-plant division of IAE [Institute of Nuclear Power Engineering] imeni Kurchatov, I. Slesarev. "Any protective systems could fail to be triggered, but the laws of nature are always triggered. A set of those laws, inherent in the principles of operation of a reactor, would raise its safety sharply."

Many groups of physical processes must be selected to wrap the reactor around our finger time after time. This is labor-intensive and creative work. This is that same supreme mission that the physicists and reactor builders lost over twenty years.

Yes, of course they were thinking about this before. But their work was striving in epic fashion into the future. But it became clear four years ago that a fundamentally new reactor is needed. This way of posing the question in and of itself was nothing other than an "accident" of thinking for some physicists. Many people, after all, had given all their efforts to the older-type reactors, and they were sure that they could and should be improved, they still had ideas that were in need of realization. An intelligent compromise is possibly needed. But in order to make a breakthrough it is necessary that the new ideas be mastered more quickly by the mass of scientists.

"That is just why reactor building needs new people," feels I. Slesarev. "The lack of a supreme mission, after all, is having a ruinous effect on the young scientists too, many of whom have simply gone stale waiting for interesting work. The period of doubts and reflection on which you find your path has been bypassed. A feeling of the possibility of a nuclear renaissance is appearing. Enormous work lies ahead of us, we will have to consider an enormous number of variations. The necessity of international collaboration arose long ago in nuclear reactor building, in my opinion. We must unite to create new designs. We will lose a great deal of time if we do not distribute the work among various countries. And only then will we be able to achieve a safety level described by the number 10^{-7} (the probability of one serious accident in 10 million years of operation).

"Many specialists have a negative attitude toward 10^{-7} because they are convinced that this is even too much. But the presumption of infallibility has collapsed while the nuclear renaissance has not yet ensued, and evidently only that number will mark its arrival. Only with that will scientists be able to return trust to their science."

Here it is clearly time to talk about a concept fundamental to the development of nuclear power—the concept of risk.

The Category of Risk

No system with a large release of energy can be safe. It is impossible to create an absolutely safe reactor. But we were long convinced of it anyway. But the specialists preferred to remain silent, or else smile skeptically at the word "absolute."

What were they afraid of? Why was the myth constructed that collapsed in no time four years ago?

They felt that this was the sole way of conversing with a public that could not even correctly perceive the figure 10^{-7} : the concept of risk was contained in it nonetheless. And while we cultivated a presumption of infallibility toward the scientists, they cultivated a presumption of stupidity toward us. They didn't think that since they were claiming to be designing absolutely safe reactors, we would take them at their word and begin to treat them as being absolutely safe. Meanwhile the operators of the AESs were playing checkers, came to work drunk and left without drying out.

Today the illusion of safety has disappeared. It is a good time to talk about the illusion of total safety. And here conversations of specialists with non-specialists on the categories of risk could serve in good stead, to convince that a risk of 10^{-7} is infinitely small, so small that it cannot even be imagined.

The concept of risk cannot be constructed just on certain probabilities and approximate assumptions. The computations of scientists should be precise—they should also demonstrate a readiness for a new level of interchange. It turns out that this is not so easy. No, not from a technical point of view.

"Quite recently we were hindered by an incorrectly understood conscientiousness: we cannot weigh on a scale the value of a human life," said I. Slesarev. "And that was all. We don't dare, we said to ourselves. Such straightforwardness prohibited us from thinking about how many people we could lose in the event of an accident. Today it is completely clear that it is essential to obtain clear-cut estimates of the losses—naturally not so as to plan them, but so as to have the possibility of comparing which way is less dangerous."

And so, let's sum up.

Nuclear power can and should be developed. But a qualitative breakthrough must happen in reactor building in order for trust to return to it, responsibility

for which lies with the State Committee for the Utilization of Atomic Energy, scientists, the teachers at higher educational institutions and the staff people at AESs. A fundamentally new concept should be combined with an ethically well-thought-out and moral attitude toward the technology and the serious changes that are now occurring in science for a return of trust. Only then can we believe in a nuclear renaissance.

But it has not ensued yet. How is nuclear power being developed today?

"It's possible we need a breather," feels L. Feoktistov. "Halt the construction of new nuclear power plants. The power engineers and scientists have enough work. The service lives of operating reactors are running out, and it's not so easy to solve their problems. Mothball them? Extend their lives to 50-60 years? These questions will have to be answered. But the new AESs can wait. The more so as they seem to understand that at the State Committee: the construction of some AESs, the Armenian for example, has been stopped. There's no need to rush."

Thermoelectric Power Development Urged

904E0011B Moscow PRAVDA in Russian
11 Oct 89 2nd Edition p 3

[Article by USSR Academy of Sciences Corresponding Member D. Zhimerin under the rubric "Scientists on Power Engineering": "Lost in the Heat of Debate"]

[Text] *Today, when a sharp debate on the paths of further development of power engineering is underway in the country, I would like to remind you that according to the idea of V.I. Lenin, the GOERLO [State Commission for the Electrification of Russia] plan was to have been a comprehensive and indivisible national-economic plan on the sole possible basis of electrification. That approach—comprehensiveness—is, in my opinion, lacking in the current debate, imparting a somewhat one-sided nature to it. What do I have in mind here? There is no little emotion in the disputes, but a scarcity of comparative analysis of the state of affairs in the development, level and structure of power engineering overall and the constituent elements of it is being clearly felt.*

The production of electric power in the Soviet Union, as, by the way, in the whole industrially developed world, is based on three technically, economically and ecologically different systems: thermal, nuclear and hydroelectric power plants. I would make the reservation at once that attempts to replace these sources of electric power with so-called alternative versions of energy—solar, wind and geothermal—are still in the conjecture stage.

Here is what the numbers say. It is well known that the electric-power-to-worker ratio in the USSR lags considerably behind the other industrially developed countries. The needs of production require the start-up of 15 million kilowatts of new capacity each year. The actual additions in 1985 and 1987 were 11.8 million kilowatts

in each. The maximum capacity of wind-power installations in the USSR does not exceed 10 kilowatts, or 75 kilowatts worldwide. The capacity of solar electric power plants in the Crimea is 5 kilowatts, and that of the Puzhetskaya Geothermal Plant, 11,000 kilowatts. It is not difficult to calculate that the conversion to so-called alternative versions will require so much area that agriculture will be left without any land.

Whence follows the conclusion that reductions in the construction and capacity start-ups of hydroelectric and nuclear power plants can be compensated for in principle only by thermal electric power plants. But then the question of fuel reserves arises at once...

And there is yet another circumstance. The problem of the ecological cleanliness of electric power plants has been posed very sharply in the course of the debate. The most heated disputes have erupted around hydroelectric plants [GES], which, in the assertions of a number of their critics, inflict irreparable harm on the land, fishing, tourism and nature in general. Some of them have even been asserting that a process of curtailment of GES construction is underway around the world. According to the official data of the World Power Conference (WPC), however, GES capacity worldwide increased by 1.8 times over the years 1978-83, as did the production of hydroelectric power by 1.6 times.

A new version then appeared that all the countries were building small GESs, while it pleases the hydroelectric power engineers in the USSR to build giants. But once again, according to the official data of the WPC, the largest GESs are being built not here but in Brazil, Argentina and China.

The advocates of a global conversion to the construction of small GESs do not trouble themselves with proof of their economic, ecological or other advantages. A small GES taken separately, of course, floods significantly less land than a big one. But so many of them must be built to replace a high-capacity GES! World practice has shown that small GESs are much more expensive in proportionate capital spending and labor productivity and require more personnel to operate than large GESs.

A campaign against AESs was also launched after the accident at the Chernobyl nuclear power plant. It must be said that criticism of the drawbacks of AESs is ongoing in practically all countries. Only Sweden, however, has decided on the gradual removal of all AESs from operation. They are planning to cover the withdrawn capacity via the construction of thermal electric power plants using Soviet natural gas.

The requirements for the electric power obtained from AESs could also be compensated for in our country by building thermal electric power plants (using coal, oil or gas) or hydroelectric power plants using the ecologically cleanest source of fuel—rivers. There is no other way, and no alternatives are visible for the next few decades.

The strained situation in power engineering meanwhile continues to get worse. As the former first secretary of the Komi CPSU Obkom, V. Melnikov, noted at the April (1989) Plenum of the CPSU Central Committee, "All have the same desires—close everything here, stop everything, and if you build, build only someplace else. And give me the output."

That situation relates entirely to the erection of new hydroelectric and nuclear power plants as well. The impermissible prolongation of the deadlines for the start-up of new facilities and growth in the volumes of incomplete work were noted at a Central Committee plenum and at sessions of the USSR Council of Ministers. These shortcomings are being manifested especially acutely in power engineering. Plans for the start-up of new capacity at hydroelectric, nuclear and thermal electric power plants have not been fulfilled for over twenty years. The amount of unfinished work has reached many billions of dollars, the proportionate share of obsolete equipment is increasing and the rate of decline in the unit consumption of fuels has been reduced. All of this taken together requires a comprehensive and considered review of the problems of power engineering.

The specific features of thermal electric power plants—whose proportionate share of the country's power equation is more than 70 percent—need to be analyzed first and foremost from that point of view.

The principal economic advantage of the central heat and electric power plant (TETs) consists of the fact that they have a higher fuel utilization factor by generating electricity and thermal power simultaneously than do the separate production of electricity and heat. Another advantage of the TES and TETs is the fact that a considerable portion of them use low-grade solid fuels—coal and shales.

But they have serious shortcomings at the same time. The most major one is the by-products of combustion in the boiler furnaces (ash, slag, smoke emissions) that pollute and poison the atmosphere and the environment. The negative consequences of burning low-grade solid fuels—Kansk-Achinsk and Ekibastuz coal, Estonian shale—are further aggravated by the fact that these types of fuel contain up to 50 percent or more non-combustible mass and many harmful substances. About 125 million tons of ballast are discharged into the environment as a result.

The problem of raising the ecological cleanliness of TESs under contemporary conditions has taken on an acute nature worldwide. A law has been adopted in many countries, in West Germany for example, according to which all TESs should have devices for removing sulfur and nitrogen oxides. These devices, according to official data, have increased capital spending by almost a third. These expenses are partially recouped through the utilization of sulfur and nitrogen oxides to obtain commodity by-products that are used in the national economy.

Unfortunately, it must be added that the removal of sulfur and nitrogen oxides from exhaust gases does not entirely solve the problem of the ecological cleanliness of TESs. Chemical compounds, mercury, arsenic and strontium harmful to the environment that are contained in the coal remain and, together with the exhaust gases, ash and slag, poison the air and the environment.

Taking this into account, the scientists and design engineers of the Power Engineering Institute imeni Krzhizhzhanskiy (ENIN) have developed and created experimental installations for enriching low-grade coals and Estonian shale. They make it possible to remove excess moisture from the coal and slag, extract chemical products needed by the national economy and obtain liquid fuels and high-grade briquettes. But both installations, as they say, have not been brought to fruition due to departmental squabbling. USSR Minenergo [Ministry of Power and Electrification] refers to the fact that the production of chemical products should be accomplished by Minkhimprom [Ministry of the Chemical Industry]. The very idea of the comprehensive utilization of the diverse and valuable components contained in the shales and the low-grade Kansk-Achinsk coal is thereby distorted.

The power engineers, along with the machine builders, have assimilated the production of complex equipment and the direct combustion of Kansk-Achinsk coal with all of its components (including those harmful to the environment) and have proven the economic expediency of utilizing low-grade fuels. Today it is necessary to convert to the comprehensive processing of this fuel. The executives of the chemical and petrochemical industries have a vested interest in the production of chemical products, as well as liquid fuels, obtained through power-technology processing. They feel, however, that the whole complex for the processing of Kansk-Achinsk coal and shale does not correspond to their sector principle.

I would add to this that an electric power plant operating on shale oil or gas consumes ten percent less fuel than in the direct combustion of shale. The capital investment declines accordingly, the consumption of electric power for in-house needs is cut in half and—most importantly—the ecological cleanliness of the plant is ensured.

The economic expediency of the comprehensive processing of low-grade Kansk-Achinsk coal consists, first of all, of the fact that it is converted into a highly valuable solid fuel with a high calorific value and liquid by-products (diesel fuel and gasoline); second, chemical by-products essential to the national economy are extracted from the coal. The receipt of liquid by-products and combustible gas from shale and Kansk-Achinsk coal opens up an opportunity to create integrated so-called steam-gas installations with steam and gas turbines. The coefficient of these turbines is 20 percent higher than steam-turbine power units and even more compared to gas-turbine installations.

The comprehensive power-technology processing of Kansk-Achinsk coal and shale is, in short, progressive and economically advantageous. The ministries and agencies formally recognize the advantages of this power technology but categorically repudiate it as being "outside the field" of each of them. Old stereotypes of thinking have the upper hand over common sense.

Plant to Handle Chernobyl-Affected Soil Proposed

904E0034A Kiev RADYANSKA UKRAYINA in
Ukrainian 21 Nov 89 p 3

[Article, published under the heading "Let's Dot the I's," by N. Sukmanska, department editor with the magazine *NAUKA I SUSPILSTVO*: "The Price of Silence Is High"]

[Text] All those to whom our native land's natural environment is dear should not impede but should help accomplish prompt construction of a facility to process radioactively-contaminated material from the 30-Kilometer Zone around the Chernobyl nuclear power plant.

"When we on the Committee on Architecture and Construction were confirming Konovalov as minister of medium machine building, and I put the question to him, since the entirety of nuclear power engineering will be administered by him, he who gave approval to build in the Chernobyl zone a facility to process nuclear waste, to which nuclear waste will be hauled in from all over the world to be processed, as if we were some sort of serf state, he finally admitted, when he was backed against the wall: 'You people are really something! Your own Paton, president of the Academy of Sciences, proposed construction of this plant.'" (From statements made by writer V. Yavorivskyy on the television program "Rukh and the Issues It Addresses," which was aired at the end of June 1989).

Everything began with this. Subsequently, scientists from the Ukrainian Academy of Sciences made statements in the press, and once again V. Yavorivskyy, in *VECHIRNIY KYIV*. And passions were aroused.... Let us take a look at this issue, as *RADYANSKA UKRAYINA* promised in the report from the First Congress of the Green World Association on 15 November, a look at this enterprise code-named Vector, in a business-like manner, that is, let us address the issue in terms of documents and facts.

When the Chernobyl disaster occurred, there was no time for reflection. It was like war. People's lives were being saved. All decisions were made without any documents, agreements, signatures, or vacillations. They hastily dug pits and trenches and dumped at these locations contaminated equipment, soil, trees—in short,

everything that was maintaining a high background radiation level. People were working day and night.

Finally everything was buried, washed clean, and plowed under, and the population had been evacuated. Everybody sighed with relief. But time has passed, and areas of radioactivity are appearing where they did not exist at first, and the radioactivity is gradually spreading. Incidentally, that is to be expected, for the radioactive waste was not disposed of. It was not stored in accordance with approved standards, but remains where it was initially dumped and covered over. In addition, within the Zone there are no true radioactive waste disposal facilities, but rather so-called radioactive waste temporary localization sites. Wind, water, and any human activity do their nefarious work—promoting the spread of radioactivity.

What is to be done with the millions of tons of radioactively-contaminated material which has accumulated in the Zone? Should it be hauled away? But this would require thousands upon thousands of massive trains. In addition, it would be impossible to eliminate the radioactive dust generated during loading, unloading, and transport. What would then happen to the Ukraine? The fact is that the Chernobyl material would contaminate not only our republic but would be scattered to the four winds. But what is the solution? We cannot leave it there, and it is dangerous to haul away....

The Kombinat Production Association was established to neutralize the consequences of the disaster in the 30-Kilometer Zone. V. I. Komarov, the then chief engineer of this association, appeared before a session of the Presidium of the UkSSR Academy of Sciences and proposed "proceeding immediately with planning and disposal of radioactive waste in the Chernobyl Nuclear Power Plant Zone."

The above quote was taken from the stenographic record of his statements. He also stated: "Long-lived radioactive waste would be processed (asphaltized, processed into concrete, vitrified—whatever the scientists recommend) and transported to central disposal sites or repositories, in the Semipalatinsk area, for example...."

V. I. Komarov also proposed building a third unit at the Chernobyl Nuclear Power Plant. The Academy of Sciences emphatically rejected this proposal. But it voiced approval of the need to build an enterprise to process the radioactive waste which is temporarily buried on the territory of the Chernobyl Nuclear Power Plant. Thus another document was generated, approved in December 1987 by M. F. Lukonin, the then USSR Minister of Nuclear Power Engineering—"Project to Design an Enterprise for Processing and Disposal of Radioactive Waste in the Chernobyl Nuclear Power Plant 30-Kilometer Zone." It was approved by the chairman of the USSR State Committee for Hydrometeorology, the chairman of the Kiev Oblast Executive Committee, the head of the Third Administration of the USSR Ministry of Health, and the vice president of the UkSSR Academy of Sciences.

At this point, scientists should have spoken up in the press and explained to the public what they were planning to build and for what purpose. But scientists were not yet accustomed to this kind of action and did not at all expect that the public would be deliberately misinformed, for what was being planned was an enterprise the purpose of which was to protect the Ukraine from radioactive waste. I should note that I too feel culpability before the public: I knew that they were planning such a construction project in the Zone. I heard about this on several occasions from scientists and from colleagues in the joint campaign against the proliferation of nuclear power generating facilities in the Ukraine, and yet it did not come to me to write about it. But who had any inkling?

In the meantime, things were moving forward. The project was given to the All-Union Scientific Research and Design Institute for Power Engineering Technology in Leningrad. And within a year's time another document appeared, consisting of six volumes and entitled "Technical and Economic Substantiation [TEO] for Construction of a Complex for the Radioactive Decontamination, Transportation, Processing and Disposal of Radioactive Waste From Areas Contaminated as a Result of the Disaster at the Chernobyl Nuclear Power Plant." (Code name Vector). Let us take a look at this document.

"The main purpose of establishing in the 30-Kilometer Zone of the Chernobyl Nuclear Power Plant an enterprise for the collection, transportation, processing, and disposal of radioactive waste created as a result of the disaster at the Chernobyl Nuclear Power Plant is to reduce levels of radioactive contamination within the 30-Kilometer Zone to prescribed health standards, to prevent the migration of radionuclides above established standards by means of transport by surface runoff and groundwater as well as by wind, to reduce the volume of radioactive waste material and to concentrate it at a single, rigorously-monitored site and, as an end result, to prevent radioactively-contaminated material from affecting the environment.

"At the present time there continues to be a potential danger of spread of contaminated material beyond the boundaries of the 30-Kilometer Zone, although the danger is not immediate. We feel that any complacency in this matter, such as has been observed recently, is dangerous. Only the collection, processing, and reliable disposal of radioactive waste can permanently eliminate the danger of uncontrolled spread of contaminated material. This is an additional factor which makes it necessary to establish a special enterprise to process and dispose of waste and to develop methods and means of collecting and transporting radioactive waste to a single, rigorously-monitored site."

Does anybody still entertain doubts about the purpose of the enterprise code-named Vector? We quote again from the TEO: "...The TEO should not contain materials with a security classification of Secret, with the

exception of adopted technical solutions at the statement of engineering requirements stage.... The TEO should be subjected to environmental impact assessment, and the main provisions should be made known to the public."

Just why is it that they have not been made public? They simply have not had time to do so. Serious scientists never rush into publication. After all, the TEO still had to be submitted to an environmental impact assessment.... Incidentally, the TEO is presently being examined at the Kombinat All-Union Association, and after its assessment is completed (which should be in the very near future), it will be forwarded to all those agencies which have been working on preliminary specifications.

Why is it that the public is so hostile toward an enterprise conceived for the purpose of protecting the public? Is it because the public is uninformed, underinformed, or is not familiar with the scientific terminology involved? If that is the case, one is hard put to understand why it is that those who have made statements in the press made no attempt to obtain information from the Ukrainian Academy of Sciences. But there is also an explanation for this: the situation has been tense since Chernobyl, and there has been extreme distrust of government and government agencies.

But how does one explain the fact that an article appearing in the 25 September issue of the newspaper VECHIRNYA KYIV entitled "Truth is Entitled to the Truth" contains a response by USSR Minister of Power and Electrification Yu. K. Semenov to questions put by USSR People's Deputy V. Yavorivskyy pertaining to construction of an enterprise in the 30-Kilometer Zone? Two sentences were omitted from the article, which in my opinion completely changes the content of the response. The full statement follows, with the omitted portions boldfaced.

"I can easily answer that question, for the government also made me deputy chairman of the government disaster recovery commission. I spent more than a year at Chernobyl. In 1986, I was there for 7 months straight. For this reason, I am familiar with the situation. The proposal to build a plant in the 30-Kilometer Zone originated at the Ukrainian Academy of Sciences, with Comrade Paton. Since the area is contaminated, his reasoning went, let's build it here. Our position toward this proposal is negative. **A specialized organization, Spetsatom, was established there, for the purpose of conducting disaster recovery and rebuilding activities, which it is in fact doing. Incidentally, after the earthquake this organization gave considerable assistance to Leninakan, as it had a unique 180-ton crane with an 80-meter extensible boom. They worked wonders in Leninakan.** The plant will cost 120-150 million rubles. The idea of building this plant is being encouraged by your Ukrainian scientists, **since in their opinion the nuclear power plant's water impoundment—part of the Zone in which fallout occurred—is contaminated by radioactive waste, and for that reason this radioactive waste material should also be removed from the water impoundment, to prevent**

it from spreading to the rest of the Ukraine, and should be processed. Therefore you yourselves should determine the question: if you don't want it built, we will not build it. If you want it built, we will build it. I have stated my opinion: I am against this construction."

Why is it that in the heat of debate this people's deputy omitted words which reveal the very essence and substance of the future enterprise and give an answer to his question? And, most important, he was not at all surprised at how quickly this ministry became reeducated, a ministry which, together with the Ministry of Nuclear Power Engineering, has covered the Ukraine with a network of nuclear power generating plants. I recall how at the All-Union Conference on Problems of Development of Power Engineering, which was held last September in Kiev, there were statements of opposition against any Ukrainian scientist who was attempting to protect even some small part of our land against the pernicious effects of the "peaceful atom." This very ministry is opposing the alternative draft energy program for the Ukraine drawn up by our Academy.

And then suddenly such forbearance: "If you don't want to build, we won't build." What is happening here? Has the minister of power and electrification lost his ministerial interests? Of course not! The minister was stating the truth: he is against construction of an enterprise to decontaminate the Chernobyl Zone, for it will cost the ministry 150 million rubles. And as is evident from the cited statement, Yu. K. Semenov feels that Spetsatom is sufficient for our needs. It helped at the time of the earthquake, and it will also help in decontamination efforts. Why spend more money? This is why an enterprise which is so needed today by the entire Ukraine is planned for construction over a period of six (!) years. And one should be fighting not to prevent its construction but rather to ensure its completion at the earliest possible date. Herein lies the problem right now! If an enterprise to decontaminate the 30-Kilometer Zone around the Chernobyl Nuclear Power Plant does not begin operating in the very near future, radioactive dust will settle, in the figurative sense, on the clothes of its opponents.

A question arises: what will happen to the enterprise when it has processed all the radioactive waste? Who's going to want to do the job of dismantling this facility, which cost so much to build? In the first place, as already stated, there are great quantities of radioactively contaminated material—millions of tons. By the time the plant is built and has processed and disposed of the radioactive waste, it will be time to retire reactor units 1 and 2 at the Chernobyl plant. And what about the "Sarcophagus" [concrete shell encasing the stricken reactor]? It can't just remain there forever. As we see there will be plenty of work to do.

In general the UkSSR Academy of Science's scientists would like to get the Chernobyl plant retired from service as soon as possible, and to establish a prohibited area, a protected area, and a radiological environmental

scientific research facility in the 30-Kilometer Zone. There should be no economic activity in the Zone—no farming, no construction, and no mass transportation for all this promotes the transport of radionuclides out of the zone. In addition, the area should be planted in trees, shrubs, and special plants which would inhibit dust and prevent soil erosion.

Of course concern about construction of a radioactive decontamination enterprise exists not only among the public but within the scientific community as well. Perhaps Corresponding Member of the UkSSR Academy of Sciences Ye. V. Sobotovich expressed it best: "The Ukrainian Academy of Sciences welcomes the building of an enterprise to decontaminate the zone, but it is absolutely opposed to any measures which could worsen the radiological-environmental situation. In my opinion we should obtain from Glavatomenergo and the Kombinat All-Union Association a guarantee that no radiochemical production facility (of any type) will be built within the 30-Kilometer Zone."

In other words, they are planning one thing, but they could build something quite different. But we still have the UkSSR Supreme Soviet, whose job it is to ensure proper oversight over construction, which cannot be done by any republic-level agency, including the UkSSR Academy of Sciences. Nor would a citizen-type commission do any harm.

"Nature has been kind to us these last three years," stated Ye. O. Yakovlev, head of the hydrogeological projects and protection of the geological environment department of the Ukrgeologiya Administration. "We have not had any major seasonal flooding. For this reason, we must literally immediately process all radioactively contaminated material, separate out the neutral material, concentrate the highly-radioactive waste and remove it from the Zone in special sealed containers, transporting it to special repository facilities located in stable bedrock."

Vice-President of the UkSSR Academy of Sciences Academician V. I. Trefilov stated: "No normal individual, let alone a scientist, would ever dream for a single moment of planning the construction of a spent nuclear fuel reprocessing facility within the Chernobyl Zone, where the level of radioactivity is already so high, and to haul waste from the world's nuclear power generating plants to this site 'like to some kind of serf state.' It is particularly regrettable that charges of such intentions are being leveled at people on whose clothing radioactive dust has in fact settled on repeated occasions, for they were working in the Zone during those difficult days and nights in May and June 1986. We must protect the population of this republic against additional doses of radiation, and therefore we must speed the pace of construction of an enterprise to decontaminate the 30-Kilometer Zone."

Here is a statement by another scientist, a "Chernobyl-ian," Corresponding Member of the UkSSR

Academy of Sciences V. M. Shestopalov: "The overall directional thrust of the plan for the proposed enterprise is correct. It must be built in order to clear the Zone of concentrations of radionuclides. This will make it possible to improve the environmental situation in the Chernobyl Nuclear Power Plant Zone and to safeguard the population of this republic."

In conclusion, I would like to quote from another document, a letter from USSR Minister of Atomic Energy

and Industry V. F. Konovalov to the UkSSR Academy of Sciences: "As regards your inquiry pertaining to the storage of radioactive waste from the nuclear power plants of the USSR and the CEMA member nations on the territory of the Chernobyl Nuclear Power Generating Plant and the Ukrainian SSR, I hereby inform you that the ministry has never had any such plans. I have given exactly the same reply to deputies at all meetings of committees and commissions of the USSR Supreme Soviet before which I have appeared."

**AUCCTU Official on Election Campaigns,
Worker Distrust***904F0027A Moscow TRUD in Russian
16 Nov 89 pp 1-2*

[Interview with V.T. Ivanov, member of the AUCCTU Presidium and head of the AUCCTU Organizational Work Department, by TRUD correspondent V. Konstantinov: "Find Your Own Identity"]

[Text] The reporting and election campaign is continuing in the country's trade unions. This year it is taking place under the influence of the decisions of the Sixth AUCCTU Plenum, which adopted a firm policy aimed at basic perestroika in trade union work. It is focused on the protection of the legal rights and interests of working people. V.T. Ivanov, member of the AUCCTU Presidium and head of the AUCCTU Organizational Work Department, has told a TRUD correspondent how the trade unions' new policy is becoming apparent in the course of the current reports and elections.

"As of today," V. Ivanov said, "the reporting and election meetings and conferences in primary organizations have been practically completed and the middle-level trade union organs—the rayon, city and oblast committees of trade unions—are hearing reports and being formed. In December and January, most of the interunion conferences will be held. A special republic trade union congress is also planned for December in Estonia, and in March 1990, a congress of Lithuanian trade unions and a constituent congress of Russian trade unions will be held. Congresses of two sectorial trade unions—fishing industry and coal industry workers—will be held in February and March next year.

"This is the external outline of the campaign that is under way, but in its content it differs sharply from those reports and elections that existed previously."

[Konstantinov] What is this related to?

[Ivanov] First of all, obviously, the overall situation in the country, and the upsurge in social activity by the people and entire labor collectives that have become extensively involved in all the processes of perestroika. Dissatisfaction with the course of perestroika and the activity of many state and public institutions, including the trade unions, of course, is often expressed at the meetings and conferences. In sharing those troubling assessments of the condition of the trade union movement which were made at the Sixth AUCCTU Plenum, workers are suggesting specific ways to get out of the crisis. And they are not only suggesting, but acting, by replacing those who have "stayed too long" and the workers who have been restructured slowly and by delegating true leaders to the higher trade union organs.

In a word, the time itself demands a search for non-standard solutions and a detailed analysis of the reasons for the decline in trade unions' authority in each specific collective and in each region. In Tyumen Oblast, for

example, during preparation for the reporting and elections, a poll was taken to show the relationship between workers and trade unions. The results obtained, I think, are typical not only for Tyumen. In response to the question "Is the trade union committee protecting your interests?" 61.3 percent of the oil workers polled, 35.2 percent of the medical workers and 52 percent of the vehicle drivers gave a negative answer. And this is how oblast workers evaluated the activity of their obisovprof [oblast trade union council] in resolving urgent social problems. Some 64 percent of those in Urengoy, 62 percent of those in Surgut, 40 percent of the Noyabrsk residents and 25 percent of the workers in Tyumen responded briefly: "I don't know." The overwhelming majority of those polled in the settlements of Raduzhnyy, Sovetskiy, and Tyumen itself gave a very negative assessment of the council's activity. It is understandable that these data provided rich food for thought during the reporting and election meetings and conferences.

We can also mention the fact that there was not only a mirror reflection of the state of affairs in the trade unions during the reporting and elections; an active search is under way for their new "identity" and effective new methods of protecting the workers' interests. On the eve of the meetings, a number of trade union councils and trade union committees of primary organizations published appeals to trade union members and programs for action in the local press, including in "their own" papers, which are now issued by 17 trade union councils.

The Novgorod Oblast Trade Union Council's plenum has reviewed the trade unions' platform—a distinctive program to promote actions in defense of the workers' vital interests. This platform is being discussed in all trade union components and labor collectives, and it will be approved at the interunion reporting and election conference. The Kostroma, Leningrad, and Kalinin Oblast Trade Union Councils have been proceeding in the same manner.

In the trade union organizations of the Georgian SSR, union members are being acquainted beforehand with the drafts of reports and decisions, which makes it possible for most of the time in meetings and conferences to be devoted to active discussion of the documents presented and social problems.

In the Kazakh SSR, meetings have been held between leaders of the Central Committee and obkoms of the Communist Party of Kazakhstan and trade union employees, during which they discussed the question of how to build relations between party and trade union organs in a new way and what needs to be done to reinforce the real independence of trade union organizations.

This detail is also interesting. For the purpose of broad, democratic discussion of urgent problems, many trade union committees are striving to obtain the largest possible number of conference participants in preparing

for the reports. In the Andizhan Taxi Fleet, the conference was attended by another 240 members of this trade union organization in addition to the 181 delegates, and more than 30 persons spoke.

[Konstantinov] I understand that many different problems are being discussed in the meetings and conferences. All the same, what questions are raised most often and who is being criticized?

[Ivanov] I will refer only to those meetings where AUCCTU employees were present. It was noted in the course of nearly half of them that the work of trade union committees did not undergo substantial changes. Most often the trade union committees and the most active members are criticized for lack of consistency and persistence in improving conditions, labor safety and wages and in resolving the housing problem, and for failure to adhere to the principles of social justice in distributing travel vouchers and commodities in short supply.

I will dwell in more detail on the criticism of central trade union organs. Workers frequently express doubts about the AUCCTU's ability to influence the events taking place in the country, referring to the fact that their life is not being improved, but rather just the opposite.

Suggestions are being made for further improvement and simplification of the trade union structure and for revision of the USSR Trade Union Regulations. Workers often demand that USSR people's deputies from trade unions step up their work to protect working people's interests and report on their activity in labor collectives and in the press; they insist that the AUCCTU state its position more often on government decisions and draft laws submitted for review by the USSR Supreme Soviet. The desire to repeal the decree on progressive taxation of an increase in the wage fund, which objectively leads to a decline in the people's living standard under conditions of rising prices, is persistently heard. The workers expect effective steps by trade union organs to bring order to trade and limit price increases, pointing to the completely unjustified "inflation" of the cost of tourist vouchers and tickets for cultural and entertainment events. The problem of the length of vacations is often raised.

[Konstantinov] Are the lessons from the strikes which took place during the summer having an effect on the nature of the reports and elections?

[Ivanov] I would answer that question this way. The well-known events whose echoes are being heard distinctly even today were discussed in detail at the Sixth AUCCTU Plenum, where a conclusion was drawn on the definite and very disturbing departure of the workers' movement from certain "bankrupt" trade union organs which lost their trust. This has forced trade union organizations to look at their leaders more closely and to assess their competence, but the main objective is to stand solidly behind the workers through thick and thin, as they say, by protecting the working people's vital

interests. In many organizations the trade union committees have been practically replaced entirely, and informal leaders who enjoy genuine authority among the workers have come into trade union work.

For its passiveness in carrying out its protective functions and its undemanding attitude toward economic managers, the delegates to the reporting and election conference of the "Chayka" Machine Building Plant in Mtskheta (Georgian SSR) gave an "unsatisfactory" to their trade union committee and elected a completely new one. In Voroshilovgrad Oblast, 23 of the mines' 93 trade union committees received "unsatisfactory" assessments, new chairmen were elected in 47 of them, and eight trade union committees were headed by former strike committee chairmen. I will note that 87 of the 93 chairmen of labor collective councils were replaced here. The Donetsk territorial reporting and election conference of the coal industry workers' trade union expressed lack of confidence in the entire territorial committee.

I will share some personal impressions. I had occasion to attend the conference in the Kalinin Planning and Construction Association for Large-Panel House Building. The day before, a survey was conducted here and 11 percent of the workers gave an unsatisfactory assessment of the trade union committee chairman's work. The opinion of a substantial part of the collective was taken into account by delegates to the conference, and even they themselves had a considerable number of complaints about F. Nikolaychuk. As a result, he was rejected, as they say, in the elections. And the main reason, in my view, was the fact that the former trade union committee chairman was detached from the concerns of the primary organizations, the shop collectives.

[Konstantinov] It is common knowledge that members of informal organizations are taking an active part in many meetings and conferences by proposing their candidates for trade union committee membership...

[Ivanov] Evidently you are interested in the AUCCTU's attitude toward this? My personal position is this: the important thing is not membership in one informal or "formal" organization or another, but his position and his businesslike and humane qualities. Even if a collective is mistaken once in an election, it will ultimately find out who is worth what. Examples such as this may be cited. At the Minsk "Udarnik" Plant, a worker who is now a member of the People's Front of Belorussia was elected 2 years ago as chairman of the welding and assembly shop committee. Thanks to his persistence and adherence to principle, he was able to bring about improvement in the working conditions and production environment, and the authority of the shop's trade union organization as a whole was enhanced.

At the Rozdol Machinery and Repair Plant (Lvov Oblast), worker I. Ostrovskiy, a member of one of the informal associations, became the new trade union committee chairman during the course of the reporting and

elections. But oil workers in the NGDU [Oil and Gas Extraction Administration] imeni 23d CPSU Congress (Azerbaijan SSR) did not support the proposal by a representative of the People's Front of Azerbaijan to elect three candidates supported by the front to the trade union committee...

Only time will tell how sound the decisions by the meetings and conferences on personnel matters were. The main thing is that in the course of the reporting and elections there has been a proper democratic nomination on what I would say is an alternative, competitive basis of persons who consider protection of the workers' interests to be of paramount importance in their future activity. The widespread use of new democratic principles in the shaping of elected trade union organs is perhaps the most prominent feature of the current reporting and election campaign.

For example, in the Moldavian SSR more than 71 percent of the trade union committee chairmen, about 69 percent of the shop committee chairmen, and 53 percent of the trade union group organizations were chosen from two or more candidates. In Bilbinskiy Rayon, Magadan Oblast, the rayon committee of the agroindustrial complex workers' trade union circulated forms to the "primary" organizations with the request to propose candidates for rayon committee chairman. The election programs of five aspirants for this position were published in the ZOLOTAYA CHUKOTKA newspaper. As a result of a secret ballot at the conference, Yu. P. Kirina was reelected chairman of the rayon trade union committee.

During the course of the reporting and election meetings and conferences, a number of primary organizations, making use of the new right established in decisions of the Sixth AUCCTU Plenum, delegated their best representatives to higher trade union organs. It is assumed that more than 30 trade union councils will be formed in accordance with the delegation principle.

[Konstantinov] Vladimir Titovich, it is no secret that a large number of meetings and conferences are taking place in accordance with an old script, when the most important thing for the participants is to scatter to their homes a little faster. Our newspaper has written about this more than once...

[Ivanov] There are quite a few such cases, of course. And it is naive to expect all our trade union organizations to turn on command at the same time to active, persistent actions to protect the workers' interests and to restructure their work in several days. There is still plenty of poor organization and indifference. As before, many trade union committee chairmen in reporting on their committees' work put the basic emphasis on enterprises' production and economic activity and fill their reports with figures and calculations which do not help in any way to answer the main questions: the periods of time to resolve the housing problem and the steps to improve

working conditions, wages, and everyday life. Sometimes there is low attendance at the meetings.

We also have to mention the following. We all know how critical the problems of providing essential commodities are today, and how concerned the workers are about the state of the economy, the consumer market, and interethnic relations. And it is natural that the people want to hear frank and businesslike statements on these matters from the leaders of higher trade union and economic organs. Unfortunately, many of them have not proved to be prepared for an honest, direct discussion, and they try to avoid it.

The course of reporting and elections also demonstrates that individual provisions of the USSR Trade Union Regulations and instructions on the conduct of elections to trade union organs need to be refined. This refers in particular to the procedure for nomination and the election of members and leaders of trade union committees and other organs. Many are speaking out in favor of participation by all trade union members in forming the union organs and believe that the procedure for voting (by open or secret ballot) should be decided not in accordance with regulations, but as the meeting and conference participants themselves consider necessary. At times life comes into conflict with the norms established previously, and all these facts have to be thoroughly analyzed in preparing the new edition of the USSR Trade Union Regulations.

The trade union councils and committees must intensify their organizational work in preparing for and conducting sectorial and interunion conferences, direct the activity of primary organizations toward perestroika, relieve trade union committees of tasks that are not appropriate for them, encourage conscientious labor, strengthen labor discipline, and define organizational measures for trade union organs' participation in the forthcoming elections to republic and local soviets of people's deputies.

'Authoritarian Methods' Fueled Strike Movement

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[Article by A. Kitov, professor at the Academy of the National Economy under the USSR Council of Ministers: "Authoritarian Methods of Management Instigated the Workers to Strike"]

[Text] Until recently, the Soviet people judged strikes chiefly by events outside the country and by those disputes which took place in capitalist countries. In August I had occasion to witness this social phenomenon at the mines in the Karaganda Coal Basin. I will not undertake to draw final conclusions about the situation that took shape here, but I will dwell only on certain questions of a social and psychological nature.

What arrested my attention first of all? Perestroika has affected the deep-seated processes of reforms, and it has

brought party organizations and labor collectives into the movement and given them the confidence that they can resolve the many problems in economic, social, and cultural life independently. It has been impossible not to see something else: the strikes brought to light the diversity of the different ailments in public life that are tied in a tight knot of pressing economic, social and organizational problems. They, the strikes, exposed the sluggishness of the management apparatus, a substantial part of which has been acting out of touch with the requirements and interests of the labor collectives and the working people. The point is that the steps taken by the party to reform the economy have at times come up against the bureaucratic actions of economic organs and the passivity of certain party and trade union organizations and local soviets of people's deputies.

The social phenomena leading to the strike resemble the process of an avalanche's formation and descent. It is preceded by an increase in tension among the workers, "intellectual ferment," if it may be expressed that way.

The view has prevailed that particular danger exists during this period from the specific aspects of deterioration in the usual ties between people and their relationships, when the laws of the multitude come into force, when people depart from obedience and do not control themselves. The workers in the strikes appear not as participants in collective labor and producers of material wealth, but as persons who have broken off the organizational ties which have united the labor collective. They have already become "unemployed" for a certain time. And in this capacity they could not be called a labor collective, strictly speaking.

But the strikers in Karaganda and other coal basins, on the other hand, have acted as a unified, integral organism. This factor once again shames the skeptics who underestimate the potential for self-organization that is concealed in the working environment. It is a characteristic trait in that respect.

Various emissaries from informal organizations who came from Moscow and the Baltic republics attempted to associate themselves with the striking miners in Karaganda. One way or another they sought to step up the already high emotional tension and lead the miners away from their true interests. They advised the strikers to make the strike political in nature and to set forth demands for a change in the social foundations of the society. They called for an appeal to the workers and employees in other enterprises with slogans to give up their work and join the miners' strike. However, the strikers did not engage in provocations and sent the "well-wishers" from informal organizations out of their midst. And it is significant that the workers of all nationalities spoke as a common front, thereby confirming their interethnic consciousness. Marat Ramazanov, of Kazakh nationality, was unanimously elected to be a representative of the Karaganda miners' strike committee. The oblast strike committee was headed by Petr Shlegel, a German.

There is a term in psychology called the "threshold of sensitivity." For example a person does not hear every sound or see every light. It is necessary for the strength of a stimulus to be higher than the level (threshold) at which the sensory organs can react and respond to external influences. It is apparent that certain party, soviet, trade union, and chiefly economic organs have proved to be beyond the "threshold of sensitivity" with respect to the events in labor collectives. Judge for yourselves: many managers proved to be theoretically and practically defenseless in the situation that took shape, and they were unable to persuade people, to lead them. Moreover, they had no idea how to act in such complex situations, viewing the strikes only from the standpoint of the losses associated with the work stoppage.

N. Drizhd, general manager of the "Karagandaugol" Association—now the former manager, was speaking at a meeting in the city of Shaktinsk.

"The strike in the Kuzbass," he said, "has harmed the country a great deal. And if our miners strike as well, the losses will be multiplied. 'End the strike' for this reason!"

And what is the value of the statement made in the city of Mezhdurechensk by M. Shchadov, the minister of the coal industry, that the miners are not ready for economic independence? The miners proved to him in a day that they had grown to the point of self-management. And the minister changed his opinion and his position and agreed to grant independence to the labor collectives.

I really do not want to blame economic managers for the fact that they viewed the strike as if from the outside. It was felt that the question—what position they should take in the strike—did not worry them before. They were being asked for a little coal, for fulfillment of the plans. What is worrying the miners and their families? They did not learn to answer this question.

This is not by chance. Some 98 percent of the managers have an engineering education. But it is well known that the technical VUZes do not teach the theory and practice of work with people and do not provide them with knowledge of the science of human nature. A substantial deficiency.

We may as well confess that political economy is not being mastered adequately in educational institutions in the technical fields, either. The main criterion, the ABC's of science, consist of ensuring only that a person is capable of creating surplus value (or a surplus product). More simply put, profit. The equipment and raw material carry over their value to a new product, but do not create surplus value. It is clear that a person and his needs and requirements are a manager's principal concern. However, it is as if the commanders of production are leaving this truth aside.

The question arises: how are enterprises and sectors being managed without careful consideration of the thoughts and feelings of the workers? It is not a rhetorical

question. Let us take the coal industry. It is operating at a loss. Half of the cost of the coal required by the country is covered by a state subsidy. Depending on the quality, 30 to 50 dollars is paid for a ton of the fuel on the world market. Inside the country an average of 11 rubles and 40 kopecks is paid for the fuel. What a discrepancy! We have to wonder why the coal industry hasn't gone begging in the world.

"But why us here?" the coal industry workers may ask. "We do not set the prices..." That is right. But how is the ministry's influence on the labor collectives shown then? As the strikes have demonstrated, it is quite unsteady. The department's energy is being transmitted below with very modest efficiency. In turn, the influence of labor collectives on the leadership is also insignificant. Hence the "incongruities" in price setting as well as in methods of economic operation. This has been shown both in the complacency and the loss of social vigilance.

We cannot avoid mentioning how the managers reacted to the strikes. At the time that the mines shut down in the Kuzbass, the Karaganda Obkom of the Communist Party of Kazakhstan was holding a scheduled plenum of the party obkom, and its agenda dealt with implementation of the party's agrarian policy. No matter what is said, the question is important. But at that time the obkom should have had its hand on the pulse of the coal miners' labor collectives and their problems. This did not happen.

The atmosphere of calm and tranquillity was passed on to the oblast newspaper INDUSTRIALNAYA KARAGANDA. It devoted practically the entire issue on 18 July to the plenum materials. Only on the first page was there a restrained report in calm tones about everyday work at the "Akhtasskaya" mine. There was not even a hint of the alarming events that had already been fully unleashed in the basin. The next day the newspaper published an interview under the headline "Facing the Miners' Needs." D. Abdamanov, the chairman of the Miners Territorial Committee, reproached the Central Television program "120 Minutes" for stating that a strike had begun in the Karaganda Basin. The words of this trade union leader are worth quoting: "This is really a false rumor... The situation in our basin is normal, though not without tensions."

But the strike had already spread to practically all the mines, and the next day a meeting of many thousands of miners in the oblast was held in Karaganda itself. The collective of the "Stakhanovskaya" mine presented claims which later were completely included in the list of demands for the entire basin. So there was "tension" in Karaganda; this was felt in the atmosphere. But no steps were taken by party, soviet, or economic organs to deal with the situation.

The strikes relate essentially to the area of production. In our view, they concerned such economic aspects as

distribution, exchange, and consumption. This is precisely where we must look for the roots of this social shock.

We have to say this because the conflicting sides—the strikers and the managers of mining associations, and the higher economic, party and trade union organs—approached a solution of the collective dispute in different ways. The workers, for example, were seeking to obtain improvement in their families' living conditions and everyday lives, but the economic managers pressed for resumption of work. Hence the failure to understand one another, the needless aggravation, and the intensified passions.

The miners heatedly raised the question of improving the food supply. How was this problem being resolved, and how has it been underpinned by the material base?

I had occasion to observe such a scene at a meeting in Shakhtinsk. N. Tantsyura, the Kazakh minister of trade, is given the floor and immediately promises to allocate additional food funds to the city. The miners interpret the minister's gesture as a sop, and they refuse to accept it. This is also understandable. They look at the problem on a larger scale, more precisely, on a statewide scale, by demanding that the organization of trade be put in order. The strikers have not believed in promises that are not kept, either.

"The party obkom is on your side completely," A. Ibzhanov, the second secretary of the party obkom, assured the strikers at the same meeting. At the same time, he promised to check on fulfillment of the strikers' demands and advised them to send representatives of the miners to the territorial committee and return to work themselves. But these appeals produced nothing and influenced no one. Only intervention by higher party and state officials made it possible to alleviate the situation in the region.

Being among the strikers and observing the meetings, I had to compare the official leaders with the informal ones, voluntarily or not. Why did people abandon some of them, without even allowing them to speak, while they readily followed others and hung on their every word? In answering this question, I would like to express just a few considerations.

At the "Kirovskaya" mine on the very first day of the strike, the miners expressed lack of confidence in the trade union committee and decided to hold new elections. On the other hand, at other mines the secretaries of party organizations, chairmen of trade union committees, and many communists were included in the strike committees.

The watershed in all these cases was defined by the criterion "ours" or "not ours." If the official leader looked at everything taking place through the workers' eyes and experienced the successes and failures together with them, the workers recognized him as "theirs" despite his rank and position. In those same cases when

he took the liberty of speaking on behalf of society and addressed the workers as persons presumed to be outside of this society and causing economic harm by the strike, they treated him as a stranger.

One more distinction caught my attention. The economic, party, and trade union leaders usually approached people when they knew in advance what they needed and what program to suggest. They assumed that the people do not know what is good and what is bad, what they need and don't need.

The informal leader acted differently. He first listened attentively to those complaining. Then he generalized the information that was collected and he systematized and presented it to people as his own information, as the development of statements by others, and as a more precise version of their opinions. The leader is called that because he rallies people around him into groups and collectives.

The people united in a group display their "we" feelings when they are opposed by "they," that is, another group from which the former is separated. In the psychological sense (but not the political sense), the strikers are beginning to view themselves as a certain unity opposing another group.

In practice, is it far from simple to determine who "they" are in socialist reality? This is a fundamental question, and the nature of the answer to it depends on the objectives pursued by the strike and whom it is directed against as a means of struggle to consolidate the workers' interests. Everything is clear in a capitalist enterprise: "they" are the capitalists, the ones who appropriate the results of labor. But who are the "they" in our country, the ones against whom the strikers are waging an economic struggle for their interests? Economic managers are often commonly recognized in this capacity.

However, there is no point in struggling against them, the managers whose actions are regulated "from above" and "from below," for they are not the owners of the means of production and they cannot make the basic decisions under the conditions of an administrative and command system. The employees of party, soviet, and trade union organs cannot be included among the owners, either.

It is strange, isn't it: the strike is a means of struggle, but it is still unknown whom it is directed against under our conditions. The strike is painful chiefly for the associated workers and the strikers themselves. In this case, the labor collectives in associated areas are being punished twice: first from discontinued deliveries of raw material and products from the striking enterprises, and then because the strikers' demands are met from the country's national income, which is common property. The interests of those who did not strike are thereby infringed upon.

Hence it is difficult to understand that in the final analysis the strike turns out to be a means of struggle

against other labor collectives for redistribution of the material wealth. Moreover, it provokes the ones who have been "deprived" to a new cycle of struggle.

So it turns out that the strike devised by the workers as a means of struggle against exploiters is being shifted to the working class environment itself in our country and is being turned into a means of economic struggle with their own class brothers.

The root of the conflicts must be sought in property relationships. I think that the principal means of countering strikes is acceleration of the economic reform, the granting of independence to enterprises and their shift to full cost accounting and self-management, and real abolition of the working people's alienation from ownership of the means of production. Under these conditions, party organizations must master political methods of work more rapidly and methods of working with people by exerting effective influence on them. We must do everything to ensure that the Law on the State Enterprise is strictly adhered to and that the powers of labor collectives are manifested to the full extent.

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Aims, Tasks of Cooperative Workers' Trade Union Described

904F0021A Tbilisi ZARYA VOSTOKA in Russian
31 Oct 89 p 1

[Article by Eka Eliava: "Cooperative Workers' Trade Union"]

[Text] A new trade union of production and service sphere cooperative workers in the republic got a start in life. Irakli Tugushi, deputy head of the organization and instruction department of Georgia's Trade-Union Council, discusses its goals and tasks.

Life itself dictates the need for the establishment of such a trade union. At present cooperative workers are not included in the membership in the trade union except those whose cooperatives are organized at enterprises. In fact, republic trade-union committees ignore the activity of cooperative workers and their working and living conditions and do not give them practical help in ensuring healthy and safe working conditions.

The task of the new trade union is to protect the interests of cooperative workers. For this it is necessary to regulate the activity of cooperatives by means of laws and to free them from the dictate of local bodies of power. In the very near future the established organizing committee should work out a draft charter of the trade union of production and service sphere cooperative workers with due regard for present requirements for the development of the republic's economic and political sovereignty and prepare the holding of a constituent congress of Georgia's cooperative workers.

The particular feature of the new trade union lies in the fact that it will unite the republic's cooperative workers regardless of the type of cooperative activity. Such trade unions are also being established in other republics. The debates at the second session of the USSR Supreme Soviet, when the cooperative movement in the country hardly avoided a dangerous blow, that is, an attempt was made to place cooperative workers under the control of state bureaucracy, also convince us that there is an urgent need for such a step. Unfortunately, as yet not everyone understands that cooperatives represent one of the key factors in our country's dynamization. An attempt is made to cover the failures of the state sector with negative phenomena in cooperatives. It is incorrect to draw a parallel here, the scale is different—this is just the same as comparing an elephant with a pug. Of course, we must fight against speculation and grabbing, which exist in cooperatives, but with economic, not prohibitive, measures, developing their taxation and supply mechanisms. The trade union of production and service sphere cooperative workers is called upon to contribute to this.

Mine Worker Explains Reasons for Continuing Dissatisfaction

904F0021B Moscow SOTSIALISTICHESKAYA
INDUSTRIYA in Russian 7 Nov 89 p 2

[Article by V. Golikov, electrician at the Pervomayskaya Mine, Berezhovskiy: "To Live Not on Credit"]

[Text] Not very long ago we used to go out to main city squares in order to once again convince—with colorful banners and loud reports on high labor achievements—the world and ourselves of the correct path, along which we allegedly advanced with gigantic strides toward the wonderful tomorrow. However, the false gilding of show is already peeling off and the loud "hurrah" has subsided sharply. As though theatrical decorations have been removed suddenly and another reality has been revealed.

Empty counters, ecological problems, neglected cities and villages, low labor productivity, and billions of rubles for which there are no goods—this is the reality.

I am a miner. This is my 14th year in the mine. During the July days of the strike I together with my colleagues was at the city square. Yes, at that time that square did not resemble an ordinary parade square. Precisely during those days, when the Union of Kuznetsk Coal Basin workers and its program were being born, we realized the chief thing: The revolution begun from above can suffer defeat if it is not supported from below. To support it means, first and foremost, to undertake more and to show persistence, initiative, and independence. But, of course, independence for the collective is, first of all, cost accounting.

Cost accounting in our economy has been declared for many decades. During the perestroika period it has also been proclaimed as the core of renewal of the economic mechanism. Nevertheless, although a considerable time

has already passed, there is no full cost accounting at our enterprise. The command-bureaucratic system of management steadily holds defenses here even after the strike of the working class.

Not long ago I read in SOTSIALISTICHESKAYA INDUSTRIYA the following statement by L. Ryabev, deputy chairman of the USSR Council of Ministers, chairman of the Bureau for the Fuel and Power Complex of the Council of Ministers: "In a number of regions labor collectives are not in a hurry to change over to cost accounting. One of the reasons lies in the fact that they simply cannot afford independence. A considerable number of mines have a low profitability or are simply unprofitable."

However, a few days ago I met a colleague from the Chernigovskiy Open Pit. "Tomorrow," he said, "there is a conference of the labor collectives. We will try to break away from under the association's dictate." "Why to break away if the right to independence is entered in the record of measures coordinated with the government?" I asked. "The date of fulfillment of this requirement is 1 October." "If everything were so simple," he answered, "Mezhdurechensk miners would not have called a warning strike. They have the same problem: How to become masters."

What nevertheless is the situation? Do miners not take independence, or is it not given to them? Yes, many coal enterprise collectives, weighing all the "pros" and "cons," decline it. However, not at all because they "cannot afford it"—it is a matter of the same bureaucratic hindrance of perestroika. First: As long as there is no wholesale trade, it means that all funds are in the hands of the association. What kind of masters of enterprises are they if from the first day of freedom they go begging to the same departments, from under whose fetters they have gotten out? Second: As long as there are no firm coal prices and a tax system has not been developed, how in such a case can they plan their tomorrow?

People say that no matter how many times you repeat the word "halva," it will not become sweeter in your mouth. No matter how much we talk about a fundamental restructuring of the economy, goods on counters will not increase. Actions, not words, are needed. Aha, people will say to me, but you, miners, instead of working in a shock manner, all of you strike and aggravate to the limit the economic situation that is unhealthy as it is. But today we must talk not only about our rights and our offenses, we must get down to work together, concentrating our will, nerves, and strength. I agree—we must and even very much so! But with whom should we do this? With ministries and departments in their present form consolidation is impossible. Many party committees, as they say, pointblank do not want to take notice of the working class movement and, even if they see it, then only as an extra burden for themselves. Therefore, now it is not enough to simply tell people: In order to live well, one has to work well. After all, the same was declared

from all rostrums yesterday and the day before yesterday, but there was still no prosperity. People want to work, but there should also be a return. And this return should result primarily in benefits for the workers themselves.

To be honest, I am dumbfounded when I hear the following words: "About what independence do the miners of the Kuznetsk Coal Basin dream if an annual subsidy of 1 billion rubles is allocated to them?" An economic riddle, a paradox: A very rich region, a developed industry, and people who do not shun work, but suddenly they are constant debtors. Whose debtors? Why?

Who, for example, will say how much coal the country needs? The Gosplan knows, you will answer. But how much is lost? No one will attempt to answer this question even approximately. Tens of millions of tons of fuel burn away in coal warehouses or in dumps—there is nothing with which to transport it. Owing to the imperfection of power units, another tens of millions of tons are squandered. An increase in output is demanded from miners, but the more we extract, the higher the losses and we become poorer and poorer. Such a dependence results.

Until recently our Berezovskiy met guests with the gallant slogan: "The City Born at the Dawn of Communism Will Be Communist!" Both guests and, all the more, residents did not believe this slogan one iota. Because the city born at the dawn of communism did not flourish anyway, but faded. After all, it was built not for the convenience of residents, but with one goal: To pump out coal somewhat quicker. Such is the fate of Prokopyevsk, Kiselevsk, Belovo, and Mezhdurechensk. And this destructive management of the administrative system ruins not only cities, but also human souls.

Workers' committees at enterprises established not bad relations with the city executive committee. We see how it is not easy for it to solve the city's problems. Therefore, we are firmly convinced: The city should receive not charitable handouts from enterprises of Union subordination without exception, but fixed deductions from their income.

Tomorrow, perhaps for the first time in many years, demonstrators will carry the slogans of the revolution in the squares of our Siberian cities, giving them back the primordial meaning. They sound as follows: "Factories and Plants to Workers and Land to Peasants" and "All Power to the Soviets!" I and my colleagues see the meaning of perestroika in their true content.

ORGANIZATION, PLANNING, MANAGEMENT

Ivanovo Tool-Building Association, Perestroika Viewed

904G0009A Moscow SOTSIALISTICHESKAYA
INDUSTRIYA in Russian 21 Oct 89 p 2

[Interview with Vladimir Pavlovich Kabaidez, former director of the Ivanovo Machine Tool-Building Plant and currently general director of the "GESTIV" Joint Stock Company, by N. Chulikhin: "At the Service of Perestroika"; date and place not given]

[Text] Sad news, any way you look at it: Vladimir Pavlovich Kabaidez is leaving the captain's bridge of the Ivanovo Machine Tool-Building Association. His successor is already at work: the association's chief engineer Yu. Maslovskiy. Our correspondent N. Chulikhin interviewed the famous director. Kabaidez has no intention at all to retire. The "GESTIV" [Gertner—Stankoimport—Ivanovo] Joint Stock Company has just been established. He has been made the general director. They will be based in Cologne, and their business will be selling Soviet-made machine tools on foreign markets, including those from his native Ivanovo....

[Kabaidez] It is not easy, of course, to part with a favorite child. But the time has come. In 3 months, I will be 66. Whatever you say, that is an age. I have to measure my energies and capabilities against the demands of the present day. The requirements are very strict. Indeed, our association is an entire empire. So, fresh blood is needed.

[Chulikhin] Quite often panic sets in when a talented manager leaves a collective: What will happen to us now, they say? What are your feelings as you leave your post? What do you have to say about your successor?

[Kabaidez] Panic will set in where everything has been built up on a monopoly of power. Our approach has been different: all the workers have been involved in the enterprise's destiny. Immense spadework has been done both for the near and more distant future. Yes, there are problems, but there is also the basis for solving them. There are people capable of solving them. So, I will depart with an easy mind.

There is one thing that I can say about Yuriy Vitalyevich Maslovskiy, this is a worthy man. I am happy that he is the one our collective has shown confidence in. That means that my intuition did not let me down when at one time I moved Maslovskiy up from the ordinary electronics experts to the main engineers of the SKB. This surprised many people at the time: How is that, what we need is a mechanical engineer! But I insisted. And soon afterward I moved several other electronics engineers into supervisory positions as well. Even my assistant for personnel, he was also one of the electronics experts. And the primacy of the new direction was

established thereby: the ISPO set its course for the manufacturing of electronic machine tools.

I myself am a mechanical engineer by education, I graduated from the Moscow Machine Tool Institute in 1952. I know from my own experience: an electronics engineer will always be able to master the fine points of mechanical engineering, but a mechanical engineer will never master electronics in the same way, that thoroughly.

[Chulikhin] Recently, assertions have begun to crop up in official circles to the effect that ISPO's workmanship has declined. Is that so?

[Kabaidez] That is wishful thinking. In just the first 3 years of the FYP, we have replaced all the prototypes, which to some degree does affect certain parameters, but actually there is a large gain: the technical characteristics of the new equipment is an order of magnitude higher than what was manufactured earlier. We are, of course, taking a calculated risk. Take the microlathe centers for instrumentmaking as an example. No one in the world is making them except Sweden, Japan, and West Germany. Domestic instrumentmakers do not have the foreign exchange to buy them. And we are dropping 75 machines from the list and going after another 150. It is quite possible that a customer might have some criticism with respect to quality. Those who wish might turn these cases against us. But I am convinced it is better to take this kind of risk than to keep on in the old way: experimental prototype, commission, experimental run, preparation of series production—resulting in losses over a period of 10 years.

Yet we completed a design at the beginning of the year, and in September we were already demonstrating the first prototypes of the new centers in Hannover. Today, we are conducting talks about selling them in West Germany. I think that this one example says more than all the official commissions about the true level of our workmanship.

[Chulikhin] Vladimir Pavlovich, I have in front of me a letter from a West German businessman. He concludes an analysis of the state of our economy and its gloomy prospects with this: "Perestroika needs 10,000 Kabaidezes to get it off dead center." I recall that several months ago SOTSIALISTICHESKAYA INDUSTRIYA ran a special series entitled "Why So Few Followers of V. Kabaidez?" Alas, there are still not enough. And indeed, why is that?

[Kabaidez] You know, I was impressed by a director who once said flatly: "I consider criticism addressed to me immoral. I gain neither prestige nor connections from trying to keep up with Kabaidez. And you do not build on a real foundation that way." And he is right. Can it be that we do not have enough people in our country who are capable of thinking progressively and of carrying others with us? No, just as in any country, there are enough and more than enough. But we also demand of our directors "abilities" of a special kind—those for

getting ahead. And it is very rare for them to be combined with businesslike qualities.

I will go further. The appeal to "do like Kabaizhe" was, I feel, a boon to those managers in the country who did not seriously want to change anything in the economy. They had no aversion and have no aversion now to reproaching us directors for a lack of initiative. But they themselves did nothing to maintain and develop initiative. After all, it could not be clearer: radical shifts in the economy can be achieved only when you place your reliance not on directors, even if they are Solomons, but on an economic policy that has been well-thought-out. Just as in the past, we do not have that kind of policy.

Perestroika is in its 5th year, and the style of management of the economy is the same—restrictive, mediocritizing, and leveling. They even clip the wings of those who can achieve change even under these conditions.

Here is a fresh example: We intended in the coming year to achieve a growth of production of 30 percent all at once. To make a new leap. But the USSR Supreme Soviet adopted a decree restricting the growth of wages. And all at once the brakes were put on. The association's STK decided to cut the original plan back to one-third of what it was. Which is natural: However you break your neck, you still cannot improve your wages by more than 3 percent. Exactly as much as those who are barely making ends meet. So, there you have the new face of the old leveling.

And the new laws? No sooner do they manage to adopt something, than corrections, additions, and restrictions are immediately added, or else they simply repeal them altogether. How can you boost the economy with that kind of shying from side to side? Earlier, we would make fun only of the government—for its incompetence and narrow-minded approach. But the atmosphere that has prevailed in the Supreme Soviet indicates that incompetence and narrow-mindedness have spread even further. They are pulling the covers up around themselves. A deputy from agriculture makes a speech saying how necessary it is for additional resources to go to agriculture. A deputy who is a physician invariably puts his sector on the residual principle of financing. The worker in public education howls that it is in education that the financial gap has occurred, that this is where additional resources have to be thrown.... And no one says where these resources are to come from.

Compared to the West we spend three times as much energy and material to do the same job. Our domestic product is not competitive. This is what we ought to be thinking about when we discuss plans. This is what economic laws should be encouraging, not sharing. Then people's psychology will also change faster, and there will be more initiators.

But what do we have instead? Our association's machine tools are going out to dozens of countries. ISPO is competing successfully with the most advanced firms in the world. But still, just as in the past, they are not

allowing us to operate independently. It has even become worse: there is now a universal line of imposing consumer goods. And they are forcing us, machine tool builders, to switch over to saucepans.

I have already said from the highest rostrums that all the words have already been spoken about perestroika. Deeds are required. But that is the trouble, no one is getting down to the job the way he should. And until the objective conditions are brought about for initiative to become an everyday and large-scale phenomenon—just as it is throughout the world—it is inevitable that the economy as a whole will mark time.

Roundtable Discusses Unused Imported Machinery

904G0009B Moscow TRUD in Russian 19 Oct 89 p 2

[Account of roundtable discussion by Yu. Krasnopol'skiy, Moscow: "We Do Not Take Care of What We Have"]

[Text] The articles in the series "For What Are We Spending Foreign Exchange," published regularly by the newspaper, are arousing broad reader response. The letters the editors have been receiving contain quite a few sharp and direct questions: How is it that the state is spending many millions of foreign exchange to acquire equipment abroad, and then it is unable to use that equipment as an owner should? Why are steps not taken to sharply reduce the stocks of uninstalled equipment? Who should take responsibility for the ignorant attitude toward the property of the people?

These problems were discussed in a round-table discussion in the editorial offices by specialists who themselves supervise the purchasing, financing, and use of imported equipment along with those who are supposed to monitor the optimum use of resources. Yu. Sivakov, USSR deputy minister of chemical and petrochemical industry; V. Shilin, deputy chief of the summary department for foreign trade and foreign economic relations of USSR Gosplan; A. Romanyukha, chief of the Main Administration for Equipment and Aggregate Supply of the USSR Ministry of Metallurgy; S. Degtyarev, deputy chairman of the Board of USSR Promstroybank; T. Alibegov and V. Malinin, deputy chairmen of the Board of USSR Vneshekonombank; A. Melnikov, deputy chief of the Administration for Oversight of Enforcement of Laws in Economic Activity of the USSR Procurator's Office; and I. Moskovskiy, head of the department of planning and financial components of USSR People's Control Committee, took part in the discussion.

S. Degtyarev: I consider the main cause of the miserable situation to lie in the way relations are structured between the state budget and ministries in the financing of purchases of imports. They are set up incorrectly. The state, represented by Vneshekonombank, seeks out foreign exchange to acquire equipment abroad and turns it over to ministries without compensation or repayment. Essentially, that is, as a gift. And then the ministry bears

no responsibility at all for the way it spends that money. Unless you count the interest of 5 percent on credit. But they have learned to get around even that measure. From the very outset they simply incorporate that higher rate of interest into the allowances, into the construction cost estimate—and "there are no problems."

How is one to establish real accountability on the part of the ministries? In our view, the foreign exchange needs to be issued to them not in the form of a "gift," but as credit, through the appropriate bank. After all, it has to be returned in any case. So then there would be an incentive to put the equipment purchased to work more quickly, to produce products, and obtain profit....

V. Malinin: But as a matter of fact, why are we only talking about imported equipment? The situation is the same with our own domestic equipment. Except that the figures are still more distressing. As of January 1988, uninstalled domestic equipment in the country amounted to 12 billion rubles. As of January 1989, it was already 14 billion. And if you convert to import prices (which are 2-3-fold higher), you arrive at 30 billion.... Any state would long ago have gone to ruin spending money to produce equipment which then yields losses instead of profit. It is a long time now since anyone in the world has been producing and purchasing equipment for future use. No one keeps any surpluses in warehouses any longer at all. Relations are built on a precise calculation and irreproachable performance of obligations by partners. So that everything goes into operation practically upon arrival.

Yu. Sivakov: Now, let us not overdramatize the situation. Nor put all the blame on the ministries, otherwise we might think that everyone around is concerned about the affairs of the state, and it is only in the ministries that there are people deliberately steering things toward disintegration. For example, we have been blamed for purchasing "Pareks" units for producing protein-vitamin concentrates and for throwing the money away. But that is not the case after all. There was a state program for the production of protein-vitamin concentrates, we had a duty to purchase those plants and set them up. Which is in fact what we did. And only then—you remember the well-known case in Kirishi—it turned out that the production of protein-vitamin concentrates was harmful to the environment and to human health. And that program was cut back. But the contracts had been concluded, the equipment was arriving. Who was to blame? The ministry? We were at that time making an incredible effort to reduce the loss as much as possible. We were able to reach agreement with the foreign firms to cancel the contracts for many models of that equipment. What was on its way and had already arrived—motors, say, and pumps, we released to retool the branch. And nothing goes to ruin, it is all put to use. So, let us not look for those at fault among those who are carrying out orders, but rather let us look in the economic system itself.

Our planning, our design, our material and technical supply for construction are detached from real life. (A. Romanyukha also spoke about this in the meeting—Yu.K.) And nothing is making the connection. I will look at my own branch, for example. We are building a man-made fiber plant in Blagoveshchensk. According to the plans for activation, 100-120 million rubles per year have to be assimilated, but the construction plan calls for assimilating only 33 million. Let us go further: A project in Lesogorsk. Equipment worth 30 million rubles arrived, but the gorispolkom absolutely refused construction. It was the association "Stavropolpolimer": French and Japanese equipment was arriving, many millions in foreign exchange were spent on it. But construction had not been provided for at all in the plan. They said that construction capacities were not adequate. So, how did all of this get planned? And how are such questions to be decided? I think there is one way: the state order. Moreover, not the kind of halfway state order we have now, but a full-fledged one. That is, one that includes the entire chain: the project planners, the builders, the suppliers, and also development of the social sphere....

G. Alibegov: The state order is not a panacea. We have had a planned economy for 70 years and the state order for 4 years, and still things are not coordinated at all. And if you look along the chain, then it is the ministries you have to begin with. After all, they are the ones who go to the government with initiatives: this needs to be built, this needs to be applied, and for everything—give! Give assets, give limit-allowances, give contracts, give foreign exchange. And only then do we begin to count up how much all of this will cost. We need to live within our means: first look at what we have, and only then at what we want. Not the other way around. At present, in your ministry alone we have equipment representing 140 million rubles of foreign exchange arriving this year and not covered by plans for capital construction and material and technical supply. So that there will be no coordination at all....

V. Shilin: It seems to me that we have been fumbling about for the most painful point in the entire problem. This is the practice of making decisions on more and more new purchases of imported equipment at the insistence of senior officials of ministries and departments—I emphasize, at their insistence. It is all not so simple, of course, as one might think: a minister goes to the country's Council of Ministers, for instance, and the people there chide him a bit for "excessive initiative," but they give him what he asks for. In the stage of preparing decisions, everything seems quite sound. And then it turns out that this need not have been done and that should not have been done. Just remember the project about turning the Siberian rivers. How many millions were squandered on that! But what did we learn? We still have the same paradoxical situation today: Gosplan clearly sees that we cannot cover the performance of all the decisions made this year with our holdings of convertible currencies. And at the same time,

more and more new decisions are made under ministry pressure for additional purchases and for opening up new items to be financed. The pressure is so strong that it is not always possible to resist it by any means. So the disproportions in the economy increase, unfortunately.

What is the position of Gosplan on this? We have crafted a number of proposals and we will be substantiating them at all levels. The essence is to make the transition from methods of administrative voluntarism to development of the economic interests of enterprises. They must be the ones who order the equipment. That eliminates unnecessary orders and thrusting superfluous equipment on enterprises. And the principle of self-support must also operate in connection with foreign exchange. Then the state budget will not scatter its resources over branches and sectors, but will be able to concentrate them on solving major problems, nationwide, intersector, and interregional problems.

We also suppose that we should give up total planning, planning to the "last nail," especially when it comes to consumer goods. This is the scheme: the state (on the basis, we assume, of unsatisfied public demand) allocates to a given region a certain amount to solve its problems, but it does not dictate what goods to produce or how much. Orders are distributed on a competitive basis. Whichever of the enterprises proves that it can use the money effectively with the greatest benefit will get the orders. Normal competition will begin, the investment process will cease to be based on a nonrepayable grant, economic levers will take hold, including those related to the use of equipment.

A. Melnikov: I will begin with self-criticism. Probably law enforcement agencies have not been operating effectively enough when it comes to accountability. There are specific officials behind everything that we have mentioned—inconsistencies in the economic mechanism, excessive purchases, and so on. Their actions, which result in losses running into the many millions, are punishable, subject even to criminal accountability. It would, of course, be incorrect to put reliance solely on legal methods, it is above all economic methods which must go into operation here. But the involvement of law enforcement agencies must also be effective.

I. Moskovskiy: And there needs to be more vigorous and broader followup on how these economic mechanisms operate. It should not be limited to a search for "hot" cases, which even today people's control authorities do not mind showing off with, but a deep and serious penetration to the economic processes taking place....

Journalist's Comment

Let us go back to where we began: to readers' responses to articles about how many millions of rubles of foreign exchange are spent unintelligently and uneconomically. It does not seem that frank and competent answers were given in the meeting to all the questions that have been put, not by any means.

For example, the question about the personal accountability of officials for expenditure of the country's foreign exchange, which was raised very sharply in the majority of the letters. Representatives of the USSR People's Control Committee and the Procurator's Office were very careful, it seemed to us, to skirt around this question, restricting themselves only to generalities about the need to tighten measures for administrative accountability.

What kind of tightening? When 5 billion rubles are spent for nothing, and this signifies that every year we fail to receive products worth almost 3 billion—yet there are no guilty parties, the procurator's office simply looks on without doing anything! And it turns out that talk about accountability is still just rhetoric that disguises the customary irresponsibility.

An example of this, a manifest attempt to escape responsibility, is the statement made by Yu. Sivakov, USSR deputy minister of chemical and petrochemical industry, concerning the "Pareks-2M" units. Yes, those same notorious units for manufacturing protein-vitamin concentrates that have done such harm to the environment and to the health of thousands of people. The deputy minister says: We, he says, were just carrying out orders. They told us to get production going—we got it going, they told us to shut it down—we shut it down.

But is that so? No, it is not! It was Minkhimneftprom that initiated construction of the plants for production of protein-vitamin concentrates, which argued their necessity repeatedly and at various levels. In 1987, for example, we had a greater capacity in operation than in the United States, Japan, and Italy put together. But that proved not to be enough. Minkhimneftprom and the former USSR Minvneshtorg concluded a contract for delivery of another eight "Parekses" from the GDR. And this in spite of the refusal of USSR Promstroybank to issue credits—then they faced the bank with a fait accompli. The deal, they said, has been concluded, and the money has to be paid, whether you like it or not. And the result was that more than 60 million rubles of imported equipment stood idle in the warehouses of petroleum refineries at Kremenchug, Mozyr, Pavlodar, and Perm. A number of units (for the refineries at Lisichansk, Angarsk, Novopolotsk, and Syzren) were never envisaged by the construction plan at all, but the equipment is already arriving. Its total cost is more than 70 million rubles. What is to be done with it now? The deputy minister asserts: everything will go to retooling the branch. Translated into ordinary language, this means: into replacement parts. Isn't that a bit expensive?

And one can cite a multitude of such examples.

But the issue of strict personal accountability for a thrifty attitude toward the people's ruble is only a part of the problem. The discussion spoke rightly about the imperfect nature of our planning and the credit-and-settlement mechanism, about the traditional lack of promptness and reliability in relations between partners, about how

they lack economic incentives. There were also interesting suggestions: for example, to change the procedure for financing branches and sectors with foreign exchange, to transfer the functions of the customer directly to enterprises. To be sure, we should also put in this category the question of eliminating the monopoly right of USSR Vneshekonombank to conduct foreign exchange transactions, which came to a head long ago. Because it is precisely there that the gap occurs between production and the credit-and-financial system. It simply is a paradoxical situation: Vneshekonombank deals with the foreign partners, but it does not have direct relations with enterprises inside the country. Other state banks have direct relations with them, but they do not have access to foreign trading partners. They naturally must simply pay the ruble equivalent of the transaction concluded in the foreign currency, there is no way that they can have an influence on this process and straighten it out.

Many fat departments are continuing to dump responsibility on others and to go on spending foreign exchange. And at this point, although the year is still not over, it is already obvious: there will not be any substantial reduction of stocks of uninstalled imported equipment in our country at all. They remain just as high as they were 5 or 10 years ago, inflicting an immense damage on the economy of the state....

Excessive Metal Use in Domestic Machinebuilding Criticized

904G0009C Kiev PRAVDA UKRAINY in Russian
6 Oct 89 p 1

[Article by A. Chirva: "Why Are Machines Not 'Getting Thinner'?"]

[Text] Today, the national economy needs a new machinebuilding. Not cosmetically modernized, but precisely new. It is also beyond dispute that the solution of this problem depends both on science and also on production, on their close integration, and on the branch's use of the most up-to-date advances of scientific-technical thought.

One of the important factors is reducing the weight of machines. The reference is not only to saving on metal, for which there is always a shortage, although the country is producing more than anyone else in the world. "Cast" from steel, not always of the best quality, parts and assemblies are no longer meeting present operating conditions. This is a case when reserve strength is not an advantage.

Have there been appreciable shifts with respect to reduction of metal intensiveness? They have not been evident so far. The individual achievements are rather the exception to the rule than the rule itself. Competent specialists have estimated what the republic's machinebuilders would have if they brought the prototypes of their products up to the best world analogues. It turns out that the amount of metal saved in this way would certainly exceed 1 million tons a year. We would rather not believe this kind of wastefulness

on our part, but facts do not go away. In just the 1st half of the current year, machinebuilding and metal manufacturing in the republic have saved 500,000 tons of metal. It is not difficult to guess that this figure was achieved by collecting shavings, not thanks to new design features of equipment. We continue to have immense room for improvement.

Machinebuilders declare with pride that they supposedly have not been increasing the consumption of metal recently. As a matter of fact, according to the data of a check on motor vehicle plants located in the Ukraine, the republic interdepartmental commission for conservation and optimum use of physical resources says: Beginning in 1986, enterprises have managed to cover their entire output without increasing stocks of rolled products. One can only be glad of such cases. But when we recall that our ideas in this respect were grandiose (by the year 2000, according to the plan, the metal intensiveness of the country's national income produced was to be half of the 1985 level), it is becoming clear that fixing sights on one level of the unrestrained consumption of the "bread" of industry still does not indicate anything. Unless the designers of equipment take progressive science as their ally, then tomorrow those sights may have to be raised once again.

We must give to the process of the integration of science and production the significance of a specific job. Unfortunately, close contacts do not often occur between scientists and plant engineers in the machinebuilding complex. Why? Above all because of the absence of a cost-fighting mechanism. The branch still has its course set for tons, thousands of pieces, millions of rubles. Take the system of resource conservation itself. The targets for reduction of metal intensiveness are broken down to enterprises, just as they were earlier, "from above." But the reduction is planned on the basis of total marketed output. In other words, it pays the plant to raise the prices of machinebuilding products just as soon as the desired figure occurs for "conservation" of metal. Scientific development projects and design solutions are not fashionable in that kind of practice.

Here is one of many examples. The scientists of a scientific research and process engineering institute of the production association "Azovmash" proposed an interesting idea of hollow axles with increased strength. The gain, as it is called, is obvious: thousands of tons of metal saved. But, as one should have expected, the idea did not catch on. It is easier and more comfortable to push up the "gross" of old metal-intensive parts than to undertake to put the new ones into production.

But why speak of axles when Soviet-made tractors have all the tongues wagging. For example, complaints are still coming in from agricultural workers about the T-150 and T-150K plowing machines from Kharkov: they are not only unreliable in operation, they are also heavy, and they spoil the fertile layer of the soil. As for replacing the heavy assemblies and parts of the tractors with lighter and more practical ones, there has been talk about fond intentions and nothing more. Meanwhile, the team of scientists and designers have the material they need. For

example, the idea of partial replacement of steel parts and assemblies of the diesel engine with ceramic substitutes has been discussed and "making its way" for more than a year now. But all the attempts made to do this have been unsuccessful so far.

Does the cause of all ills lie only in the sluggishness of production personnel? Of course not. After all, there are enterprises that are driven by a desire to save, to utilize the advantages of scientific-technical progress. But proposing nonstandard solutions means condemning oneself to difficulties. Sometimes instructions granting permission and consent become an unconquerable obstacle. For example, the collective of the Kharkov Aviation Plant had the idea of making the transition to the production of lighter AN-74 airplanes (thanks to substitution of glass-plastic parts for certain metal parts). But an effort that was advantageous in every respect has been held up by departmental barriers.

It is paradoxical, but a fact: prospects have become still bleaker for the process of integration under the new economic conditions. And it is not just a question of science having been denied centralized funds for financing. That is after all the purpose of perestroika, to get rid of hangers-on everywhere, and to earn money with ideas. Conclude a contract with an enterprise and the more successfully and rapidly you solve the given problem, the more profitable it will be for you. That is all correct, but what do enterprises order, what do they want to have? What is achieved with less effort, what can bring in a return today, here and now? Many managers of machinebuilding enterprises (and others as well) lose sleep at the very mention of the term "investment policy." They, of course, have a right to choose and to act at their own discretion. But for some reason they give preference not to promising projects and ideas, but to what is closer to the surface.

This approach has started even scientific collectives out on the wrong road. From their reserves of development projects, they hurry to pull out and sell at a profit what the production manager likes today. And at present the developers also gain: On the average, wages have risen one-third for those scientific associates working under direct contract with the customer. In this stage, not many people are worried about whether the product of machinebuilding meets the requirements of tomorrow or how much it helps to solve the problem of reducing metal intensiveness and raising product quality.

Here we are involved in a trial as to who is to blame for our having increased the "gross" of machines produced for decades, for our having crammed thousands and thousands of additional metal into this effort, but the products have not improved. And both sides—the scientists and the production people—are blaming one another.

Plant personnel accuse the scientists of being detached from reality, they say that developments are far from the needs of shops, and so on. But are these accusations always justified?

Let us take new materials and processes. Are there a sufficient number of them in our science? Undoubtedly. V.I. Trefilov, director of the Institute of Problems of Materials Science of the Ukrainian Academy of Sciences, a member of that academy, once reported that in the scientific center he heads a line has now formed of dozens of finished developments and processes. Finished in the proper sense of the word, since the scientists have for years now been bringing their innovations down to the plant standard. Powder metallurgy, composite materials (even those that would seem to be unthinkable like metal-glass), structural ceramics.... In the director's opinion, all of this is capable even now of bringing about an abrupt qualitative leap in machinebuilding. But the new processes, unfortunately, will apparently be standing in line until they become obsolete.

Another example. The Ukrainian Scientific Research Metal Institute (Kharkov) has been developing new shapes of rolled products. The scientists have developed hundreds of sound processes. You would not expect them all to be properly confined to the laboratories. But very few of those proposed are being applied in industry. In the opinion of the institute's leading specialists, the situation has become more complicated in the recent past. Enterprises are avoiding the application of progressive designs, referring to the absence of sufficient cost-accounting profit to pay for the topics covered by contracts. Again, the well-known picture of the inertness and conservatism of production people. The more complicated, the more science-intensive, the more efficient the new technology, the more refined the rejections of it.

The mechanism of our machinebuilding, based on the gross and on costs, the "flywheel" of which is still not slowing down, is binding the hands of the designers as well. Please create, they are told. But when the creator of a new machine arrives in the shop with his drawings, they tell him: You can change the design, use the most recent materials, but do not touch the production lines or the gear. The result is well-known: The unlinkable cannot be linked any more than a bound can be imposed on the boundless. Is that not the explanation of an absurdity like this? According to the data of UkSSR Goskomstat renewal of the products of the machinebuilding complex in the republic reached 12.2 percent over the period January-June, while the plan called for 11.4 percent. But many specialists are not even trying to conceal the fact that this technology, although new, is not improved. It is just as cumbersome and heavy as before. That is why the indicators of the reduction of metal intensiveness are shamefacedly passed over in silence.

It turns out that we have a stock of good ideas aimed at reducing the metal intensiveness of machines, and there are people capable of turning them into real blueprints. What is lacking? Motivation, the economic prerequisite to stop the wave of production of enormous unreliable machines. And also, certainly, clear understanding: Unless we put the cause of integration on a high level today, tomorrow we will find ourselves in the backyard of world scientific-technical progress.

CIVIL AVIATION

Gas-Fueled Tu-155 Shown at French Symposium

904H0031A Moscow SOTSIALISTICHESKAYA
INDUSTRIYA in Russian 15 Oct 89 p 2

[Interview with V. Orlov, chief designer of the Kuybyshev NPO [Scientific Production Association] "Trud" by V. Lagovskiy: "A Gas-Fueled Aircraft Flies to France"]

[Text] An international symposium on the problems of utilizing liquefied natural gas will be held from 17 to 20 October in the French city of Nice. The USSR Ministry of the Aviation Industry plans to demonstrate an aircraft there which is capable of flying on this type of fuel, so unusual in aviation. A unique gas-fueled Tu-155 airliner is leaving on a flight to France via Bratislava.

One of the developers of the engine for this aircraft, V. Orlov, chief designer of the Kuybyshev NPO "Trud," tells us about the forthcoming demonstration:

"The Tu-155 is an experimental aircraft with a small gas tank. For this reason, two of its three engines are ordinary ones. Only one of them was converted to operate with the new fuel. But it also provides the opportunity to conduct all the necessary tests and to check the reliability of on-board systems. The most important thing to show is that it is completely practical to fly with gas fuel. And we have solved this problem. The converted engine can withstand the loads of take-offs, landings, and cruising flight. Work is being continued, and an aircraft that has been completely converted to gas is not far off."

It is no secret that we are attracted above all by the opportunity to economize other fuel. Our Western colleagues are attracted by the ecological advantages. The reequipped airliner will emit 35 to 40 percent less oxides of nitrogen than the versions fueled by kerosene. It is possible that both of them will prompt the world to begin shifting air transport to gas as well. This process is already under way with ground transport.

The Tu-155 is not an innovation for Soviet specialists. Many remember the tests with hydrogen in past years and the flights this year with liquefied natural gas. But our Western colleagues familiarized themselves close up with this aircraft for the first time at the recent "Aviatsiya XXI veka" [Aviation in the 21st Century] symposium. And they became interested. Their unanimous opinion was that we are 5 years ahead of them in the use of alternative fuels. Many noted that Soviet designers have been very successful in resolving the numerous problems associated with the conversion to gas. After all, at first glance it does not appear complicated to substitute it for kerosene. We had to develop specially insulated tanks to keep the fuel at a temperature of minus 156 degrees and a special feed and control system—in a word, we had to modify both the engine and the aircraft

substantially. We also plan to share this experiment firsthand with people in the gas industry.

Aviation Ground Services Lacking

904H0031B Moscow SOTSIALISTICHESKAYA
INDUSTRIYA in Russian 20 Oct 89 p 2

[Report by I. Negenblya: "A Light Tap With a Sledgehammer..."]

[Text] Yakutsk—Although it has been about 30 years since I observed this operation only one time, the picture remains before me like a dream: the strongest person in the brigade hitting the driftbolt set against an aircraft's tailwheel axle time after time with a heavy sledgehammer. A clang, the deafening roar of aircraft engines and other airfield noises resound throughout the area. The tail of the Li-2—a surprisingly simple aircraft—is shaking.

This is how they performed the work which was described in aircraft maintenance technology by the sentence: "Dismantle the axle with a light tap of a sledgehammer and remove the tailwheel." I think this was a brilliant example of technocratic hypocrisy, when verbal niceties were substituted for the lack of accessories and machinery.

Many of us have dealings with Aeroflot every year. Standing in line for tickets, then for registration, as a rule in a cramped, crowded passenger terminal, languishing for some time in a so-called holding unit, then we finally break loose to the space of the ramp. And even if all these procedures have not increased respect for the firm, there are few who do not admire the elegant "Il," "Tu," "An" and "Yak" aircraft lined up on the ramp or being slowly moved: some onto the runway and others to the parking area. What at first glance appears to be a disorganized movement of aircraft, special vehicles, battery-powered trucks, and servicing personnel is purposefulness and efficiency that has been well thought out.

However, the observant person will notice something else in this realm of technical progress. Here are two technicians dressed in dark shades of baggy clothing, pushing along a cart—a ground preheater. And here is another worker with a simple bucket and a 1-liter glass jar heading toward an airliner—to drain the fuel sediment. At another aircraft loaders are pushing suitcases weighing 10 or 20 kilograms, heavy bales and cumbersome boxes from a battery-powered truck into the belly of the airliner. As a rule, two loaders together load roughly 3 tons of baggage into one aircraft in 20 minutes. Every item is lifted 1.5 meters by hand.

Far from outsiders' eyes on the outskirts of the airfield hangars can be seen where the labor-intensive so-called routine maintenance of aircraft is carried out. Perhaps everything is in order with their mechanization?

A. Nedosekov, a technician first class at the Yakutsk aircraft maintenance base, has been maintaining aircraft electronic equipment for over a quarter century. He

knows his job thoroughly and is in charge of a brigade of specialists. I spoke with Anatoliy Georgiyevich about the numerous problems which concern the ATB [aircraft maintenance base] collective. And here is what he mentioned:

"While progress has been noted in the updated aircraft at the Yakutsk Airport over the past 20 years—we went from the Li-2 to the An-24 and the An-12 to the Tu-154 and the Il-76, little has changed in the mechanization of labor-intensive operations on the ground. A screwdriver and pliers are the technician's basic tools as before. We can only dream about receiving a complete set of maintenance equipment at the same time that a new aircraft comes in. So our efficiency experts have to invent and adapt something on the spot... The little equipment which we receive from the civil aviation plants or those of the Ministry of the Aviation Industry is incomplete and unreliable, especially at low temperatures."

A modern aircraft is being filled up more and more with the most complex electronic equipment. This makes specialists both happy and sad. It is annoying that more than 50 types of units, instruments and sensors have to be removed from an aircraft for checking in the laboratories when the labor-intensive routine maintenance is conducted. And many units weigh several dozen kilograms and they have to be handled extremely carefully.

But after all, in designing complex on-board equipment, aircraft designers could develop—foreign experience is available—ground-based installations, mounted on a vehicle, at the same time, making it possible to check the working order of electronics and instruments right here, on the aircraft. And then we would have to remove equipment from the aircraft for repair and adjustment in the laboratory only if deviations are observed. Now specialists are forced to perform labor-intensive and often needless work: remove equipment which is largely in working order, transport it to the laboratory, check it, and install it again in the aircraft. At the same time, it is probable that a defect will be introduced when it is installed.

"Recently we received the Il-76 airliners," A. Nedosekov said. "The aircraft is literally crammed with avionics. Well, the loaders' work was increased appreciably on this aircraft."

The problem of technical maintenance for transport facilities—aircraft, motor vehicles, and river boats (I had occasion to hear the complaints of others in addition to the aviators) is becoming more and more acute. Certain "discrepancies" are being observed: while transport in the country is being developed at the very least, the equipment to maintain it is lagging farther and farther behind today's requirements.

A new generation of aircraft are approaching, and the Ministry of the Aviation Industry is promising to deliver them to Aeroflot in the next five-year plan. They are saying time and again that this was a good two decades

and mentioning the delivery of all the technical maintenance facilities for the new airliners...

But in the meantime, as many years ago, during the heat and the severe frosts, they are putting the airliner interiors in order with a broom and washing them outside with a swab and a brush. And the technicians servicing the most advanced aircraft are still not giving up the sledgehammer.

MOTOR VEHICLES, HIGHWAYS

VAZ Auto Plant Science Center Profiled

904H0021A Moscow SOTSIALISTICHESKAYA
INDUSTRIYA in Russian 15 Oct 89 p 1

[Interview with G. Mirzoyev, head designer of AvtoVAZ, deputy director of the Scientific-Technical Center, by A. Shifrin, SOTSIALISTICHESKAYA INDUSTRIYA special correspondent: "There Are no Pessimists at VAZ"; Tolyatti, date not given]

[Text] How do you learn the opinion on a certain specific motor vehicle model without resorting to sociological sampling? Do you stand at the shop and ask the lucky people who have just turned their dream into reality? That would be naive. Do you question those who were not lucky, and have appealed to a service center? That is not very instructive, either. Just how, then? Perhaps the advertising supplement to VECHERNYAYA MOSKVA will help here. It has a section, "I Will Buy." In one of the issues of the supplement I counted 13 people who wanted to acquire a motor vehicle. Of them, only one longed for a Tavriya, the rest wanted—Zhiguls. Indeed, whatever you say, no matter how much these cars are maligned, the VAZ product is in steady demand today, and the plant has gained a reputation for motor vehicles and is rightfully considered the leader in domestic motor vehicle building.

A new subdivision recently appeared at the Volga giant—a scientific-technical center. We chat with G. Mirzoyev, head designer of AvtoVAZ, deputy director of the center.

[Shifrin] Georgiy Konstantinovich, what circumstances compelled the plant to create a science and technology center? Did you not manage without one for almost two decades?

[Mirzoyev] When VAZ was taking its first steps, it was faced with a limited task—producing a motor vehicle, bought from the Italians, which they brought to our requirements. In other words, the basis for updating motor vehicles was farmed out by Italian entrepreneurs. You yourselves realize that they were in no way interested in creating models that would be competitive on the world market. They seemingly graciously permitted us to work on improving and modernizing the motor vehicles, and that was all.

In the early days, however, we were in a state of euphoria, intoxicated by the fact that the Zhiguls proved

to be better than any of the other domestic makes. We were proud of it and did not seriously think about the future.

Life sobered us up, however. In the second half of the 1970's it became obvious that you could not go far with old luggage. The old models "got dusty"—"Fives" and "Sevens" appeared. All this was a temporary solution, though. A break-through was needed, to advanced attitudes toward motor vehicle building. The plant's old base did not permit this. A cycle of this sort had to be created: design-test base-manufacture of test models—working out production technology. Thus the idea of a scientific-technical center was born.

It also became necessary to have partners abroad, for to stew in your own juice and invent a bicycle unaided is ruinous and inefficient. It will not happen this way. The whole world is acting differently.

[Shifrin] Is the VAZ-2108 the fruit of the new approach?

[Mirzoyev] Of course. This motor vehicle is new in principle. Not a single part from the old cars was used.

[Shifrin] In order to create a new design, however, you need the appropriate trained specialists, programmed, perhaps, for this....

[Mirzoyev] You are absolutely right. In order to issue new and, I emphasize, good motor vehicles, you need to train people on this plane constantly. This can only be achieved when you work on the new designs daily. After all, what happened before? A young specialist arrived. If he was lucky, in five years he began to work on a new car. Then it was produced in two decades, and the person had already become an old specialist during this time. He retired on a pension and put his accumulated experience behind him. A young specialist came to take his place, and in general it turned out to be the same old story. Once again I repeat, it takes constant training to create new cars.

[Shifrin] The plant by no means needs a new motor vehicle every day, however. How does it manage to reconcile itself to the irreconcilable?

[Mirzoyev] Three conveyer lines are in operation at VAZ. The output of a new motor vehicle can begin only as they are respecialized in turn. The wearing-out period of the equipment is 15-17 years. Consequently, you put an innovation into production every five years, and if you count 4-5 for modifications, that turns out to be yearly updating.

This is the strategy that makes it possible to retain our position on the market and provide the actual personnel training.

[Shifrin] Does this not briefly outline the group of problems which your center must specifically solve today?

[Mirzoyev] In the middle of the 1970's there were two criteria for the approach to a motor vehicle: that they go fast and be reliable. Now, however, under the pressure of rapid technological progress, the demands have increased sharply. Electronics are advancing to the main assemblies, the motor, and are encroaching on the steering of the car. The pollution norms are getting stricter all the time. The energy crisis has urged on the search for fuel economy and the best aerodynamic shapes. The struggle to reduce the noisiness of the motor vehicle is continuing. Naturally, this is only designating the problems. Inside each one is a mass of its own problems. For example, how do you increase the operational reliability of the electronics under the conditions of the effect on them of magnetic and other fields?

That is why even abroad, motor vehicle firms are setting up scientific-technical centers. While at first there were not many of them, today many of them incorporate up to 13,000 persons.

The centers are called upon to look to tomorrow and to create a stockpile of ideas, which may even, at first glance, be fantastic.

[Shifrin] How is the selection being made at the center?

[Mirzoyev] We have concluded an agreement with a number of VUZes on purposeful training for specialists. This costs from 5000 to 50,000 rubles per person. The students arrive for practical work, and it is then that we get to know our future personnel. As a rule, one out of three pass the rigorous selection. After that, it is a matter for the specialist himself. It should be said that we have done quite a fair job of picking our kids. Moskaluk started on the first rung of the ladder and now he is being promoted to the position of head designer at the plant in Yelabug.

[Shifrin] Georgiy Konstantinovich, if it is not a secret, tell us what the center is working on.

[Mirzoyev] On five models at once.

The first is the family VAZ-2110, which should be put into production at the start of the next five-year plan instead of the obsolete "Seven."

The VAZ-2110, just as our present cars, is a front-wheel-drive variant. One modification will be to have a so-called double-capacity body, that is, with four doors. The other—triple-capacity—will have five doors.

The aerodynamic characteristics of the "Ten" will be on a new level. This coefficient will be a value of not over 0.3. For comparison, I will give data on the 2108. It is equal to 0.37, and on the old models—0.49. In the West, only a few models have a coefficient of 0.3.

The indicators for ecology, pollution and noise seem respectively to meet the advanced positions of world motor vehicle building.

The design is also a good one, both the exterior and interior of the motor vehicle. It is precisely because of the substantial improvement in the aerodynamic characteristics of the "Ten" that the maximum speed, with the same engine power as the "Nine", has increased to 180 kilometers an hour.

The higher powered engine—up to 90 horsepower—has a number of modifications. Electronic control of the engine is 100 percent guaranteed. The economy has been increased by 15 percent as compared with the "Eight."

I will restrain from speaking in more detail about the "Ten" for the time being—the firm's secret must be preserved.

Two models of the Oka are also in the works.

The Oka-1 will be the least expensive motor vehicle. It will differ somewhat from the model that many have been able to see on television.

The Oka-2 is a car that differs in principle, and has not yet been released in the Soviet Union. This motor vehicle is somewhere between the Oka and the Tavriya. It is small in size, but in convenience is in no way inferior even to the "Eight."

[Shifrin] It seems from our conversation that the scientific-technical center is faced with no problems.

[Mirzoyev] Alas, if that were only so! The construction of the center, as you can see, is going quickly. Everything looks much worse with respect to the "stuffing", however. There is a danger that in a year they will be playing soccer in the building wings because of the lack of equipment. Centralized financing with currency has been taken away, and for the time being VAZ has no funds for our needs.

Another thing. Today our specialists potentials are being only 50 percent utilized. Work on tomorrow's models is not proceeding in the volume that we would like. The thoughts and the ideas are there, but there are no free areas where they can be embodied.

Let us not be pessimistic, though. We must work, and create something new and gain a world market.

On this note the conversation closed. I did not, however, want to put a full stop to it here: I have seen the new "Ten" with my own eyes. The tear-shaped body gives its silhouette a graceful look. Not even a motor vehicle lover will immediately realize that this is a fast car. The slope of the windshield has been slightly changed for better aerodynamics. The dashboard includes an onboard computer. Moreover, some of the instruments have been turned toward the driver. The interior is spacious and comfortable.

The Oka-1 and Oka-2 are considerably smaller, of course. It would appear difficult even for a person of

average size to fit into it. No, though, you sit in the seat and there are still 5-6 centimeters to the roof. The Oka-2 has five doors.

If you like the new VAZ models—remember the workers of the scientific-technical center.

Gorkiy Auto Plant Profiled

904H0029A Moscow ZA RULEM in Russian
No 10, Oct 89 pp 4-5

[Report by ZA RULEM special correspondent V. Arkusha: "A Trip to 'GAZ' [Gorkiy Motor Vehicle Plant] Country"]

[Text] Gorkiy—The main gates, topped by four bas-relief decorations, are familiar from dozens of photographs and frames of film. Every now and then a GAZ-53 and a GAZ-52 with sparkling light blue paint come out, along with a well-built GAZ-66 in a more reserved color. And even chassis without beds and without cabs (for buses), and "Volgas"—lemon-yellow for taxis and official black ones.

When I arrived at the plant, it was only a few days before assembly of the new trucks, which we had heard about from the "Avtoprom-84" exhibition, was begun. In order not to mislead readers, I will be more specific right away: they are not diesels. The gasoline-engine GAZ-3307 was being prepared for series production in place of the GAZ-53, which has been turned out since 1965 and modernized time and again. The cab and exterior components for the "3307" were borrowed from the diesel model, but the power plant and many assemblies were retained from the GAZ-53-12. What is this, a temporary solution, a transitional model until a diesel is put into production? G. Shiryayev, the deputy chief designer for trucks, had a different answer. The GAZ-3307 will be the base model for a long time (subject to modernization, of course). But when a diesel truck is put into production the gasoline branch of the GAZ family tree will not dry up; it will remain the basic one.

"Judge for yourself," the deputy chief designer said. "There is large-scale, organized production of gasoline engines and capacities for aluminum casting in Zavolzhye. There are millions of vehicles with these engines, so there is simply no possibility of curtailing production of them, even for the sake of diesels, and the fuel balance does not permit this either, because the output of diesel fuel from petroleum is limited. It is more expedient to continue the output by modernizing the engine and the technology for manufacturing it. There are reserves here. The first models of diesel trucks had standard fuel consumption of about 15 liters per 100 kilometers, whereas the GAZ-53 consumed 24 liters. Now a diesel consumes 14 liters, and the closest limit for a gasoline engine is 18.4 liters."

The main thing that distinguishes the GAZ-3307 from the preceding model is the significantly better working conditions for the driver in the new cab and a high level

of safety owing to the double-line brake drive (divided by axles) with a hydraulic-vacuum booster in each line. Labor-intensiveness in maintenance and repair has been reduced and the service life has been increased. In a word, a well-known vehicle has been given new quality.

The conversation was taking place during the summer. Today the GAZ-3307 is already being assembled on the production line and they plan to completely replace the GAZ-53-12 with it in 1991. Well, how much headway has been made in putting the main innovation—the diesel GAZ-4509—into production? A brief but very intensive “excursion” guided by A. Dolomanov, the deputy chief technologist, helped to answer this.

It is not a simple matter to renovate the vast plant, whose foundation was laid nearly 60 years ago. New equipment has to be introduced, in the literal sense of the word: by temporarily moving the operating equipment closer together and transferring it somewhere else, by building on patches of territory that are available, and by rearranging supply lines. The Gorkiy workers have had the best success in this by mobilizing all their energy and resourcefulness. A major portion of the work is being completed: they are developing capacities to produce new cabs in the amount required for the GAZ-3307 and the GAZ-4509. Automated lines for welding (15 altogether) have been installed by the French (“Siaki”) firm, which has been collaborating with our vehicle workers for some 20 years. Part of the equipment consists of robots manufactured at the VAZ [Volga Motor Vehicle Plant]; there are more than 120 of them. Domestic equipment is used in welding other components (the hood, fenders, radiator).

Parts for the cab are stamped on automated complexes made by the Japanese Komatsu firm. But how can it be done without automation, the experienced reader will say. We can see right here, several meters from the (“Siaki”): with the help of welding vises and gas torches, they are putting parts of the GAZ-53 and GAZ-52 cabs together. To the extent that the “3307” is put into production, of course, the output of old cabs will be reduced considerably, and there will be a chance for further reequipment.

In the production under way, there are few sections left that have not been affected by the renovation. Here they are adjusting automatic equipment for cold heading: they are replacing the multiple-spindle lathes whose permanent distinctive marks are pools of lubricant and piles of cuttings. The best examples of world machine tool manufacturing are taking part in the reequipment of the GAZ: West German, French, Swedish, and Japanese firms. However, there is more domestic equipment: presses from Voronezh, automatic lines from Minsk and Moscow, and welding equipment from Tolyatti and Zaporozhye. There is an entire section of machining centers in the production of small-series vehicles. Part of them were manufactured at the GAZ in cooperation with the Ivanovo Machine Tool Building Association imeni 50th Anniversary of the USSR.

But the main objective of the renovation is to put a diesel truck into production, and to set up production of a new power plant assembly at the GAZ for this—an air-cooled engine with a clutch, gearbox, and other units. It will be accommodated in several new buildings near the operating plant. They are not equally prepared. In the shop for large hot stampings, some presses were being assembled, and others were being adjusted. In the building for nonferrous casting, equipment was being installed. But in the huge spaces of the diesel building, lost in the semidarkness (350,000 square meters!), where the machining of parts and assembly of components will be done, it is empty and quiet, like a concert hall in the mornings. Where the machine tools are to be placed there, preparation of the foundations is still far off. At least a year is needed before the hundreds of machine tools and entire complexes are assembled and working together as a unit. But the equipment is arriving, and hundreds of millions worth have already piled up. It is not surprising: after all, in conformity with the Council of Ministers decree, the production of diesel engines should have been begun “yesterday”—in 1988.

It is obvious that under conditions in which the command methods have lost strength and the economic ones are just beginning to gain it, a different course of events is possible perhaps as an exception. Renovation of the GAZ has not become an exception, in spite of the repeated trips to the construction areas by managers from the Ministry of Construction in the Northern and Western Regions of the USSR, the Gosplan, and the USSR Council of Ministers and the repeated promises to speed up the work. It is a sad chronology: 8 years from the acceptance tests of a vehicle to the beginning of series production, and another 4 years before planned capacity is reached. A truck is not a passenger car, of course, its life is long and the changes are not as radical. But it is hard to call a vehicle that takes 12 years to go into production an up-to-date one, all the same.

Let us recall how the GAZ was begun. The decision to build the plant was made in 1929, the first section was begun in 1932, and the 100,000th vehicle appeared in 1935. Let us remember that production preparation for the GAZ-51 lasted for 2 years: series production was begun in 1946. The scope is different now, of course, and the technologies and automatic equipment are more complex—but after all, so much knowledge and experience and so many capabilities have been added.

We are assessing the pace of past years more soberly today, and we understand that it was not only the result of the unprecedented enthusiasm of the masses, but the strict administrative pressure from the top as well. All the same, it is sad that the periods in which things were accomplished by our fathers and grandfathers are perceived by their sons and grandsons six decades later as unrealistic.

In closing the chapter on trucks, let us note that it is planned to radically modernize the GAZ-66 in 1992.

This will be the first stage in producing a new all-wheel-drive model of truck with a diesel engine which will be on the assembly line in 1995-1996. With regard to the GAZ-52, the immediate successor of the GAZ-51, it is not clear at present; they are studying various alternatives for its replacement. We can conclude from this alone that the replacement itself will not take place soon.

We are aware that the reader is waiting for "passenger" news, on the "Volga" first of all. It is surrounded by all kinds of rumors: about "total" exports to China, about discontinuation of production, and about replacing it with one of the Ford models. Everything is simpler and more complicated in life. They are still turning out "Volgas," as evident from the photograph, the PRC is just one of many importers, and there really were negotiations with Ford. As V. Churayev, the GAZ technical manager, said, the searches for paths of mutually beneficial collaboration are continuing. With whom, it is a commercial secret at present.

This is not relaxing the systematic work on their own models. Their prospective standardization has been updated. Production of the "Chayka" was discontinued this year. It will be replaced by the small-series medium-class GAZ-3105, a more compact, lighter, and more economical car, full of up-to-date technical features (four-wheel drive, for example) and comfortably equipped. It has a new 3.4-liter V-type engine which produces 170 to 190 horsepower. Test batches of the GAZ-3105 are already being assembled.

It has turned out to be expedient to begin production of a new family of passenger cars with a highly comfortable model of the GAZ-3105 in the areas released from production of the "Chaykas." Taking experience in its operation into account, they will begin bringing in other models in this family to replace the GAZ-24 and GAZ-3102. A new four-cylinder engine with a twin-shaft, 16-valve cylinder head is being developed in Zavolzhye for them. These models are planned for 4-wheel drive (not for increased cross-country capability!) as well as front-wheel drive versions: the GAZ-3104 and GAZ-3103 respectively.

We think that V. Nosakov, the chief engineer for passenger cars, was fully justified in restricting information on the new models. Did you like the GAZ innovations? In spite of the obvious closeness to similar foreign models, you would like them if you knew that a mass production model is not far off. Alas, even this is obscured in fog at present: there are no directive documents on preparing the GAZ-3103 for production. It is clear that they will not appear while the production of diesels does not earn and begin paying for itself. Won't the innovations become obsolete by that time? This seemed to me to be a rhetorical question, and I have not asked it of those in charge. They have not concealed the fact that a major contract with a foreign firm would give hope for beginning the new production of passenger cars quickly. Undertaking to manufacture a prospective model in the old, largely unadapted, cramped shops is

not realistic. Until a basic solution has been found, improvements are being routinely introduced in the GAZ-24-10: soon it will receive a rear axle with a barrel-type crankcase and a cooling system with a fan driven by a detachable electric motor. The pace of modernization is not fast, and it does not come easily.

The veteran plant presents a contradictory, complicated picture today. In some sections there has been a breakthrough to the most advanced technology, and in other sections, at times ones adjacent to them, the working conditions do not meet current requirements. The models of the 1990's are running over the test tracks, and the GAZ-52, with an engine developed before the war, is still coming off the production line. Under these conditions, renovation is a step in a stage, but it is just the beginning of the turn toward a broader, more intensive and continuous renovation of the automotive giant.

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RAIL SYSTEMS

Rail Management Restructuring Needed

904H0048A Moscow GUDOK in Russian 2 Nov 89 p 2

[Article by O. Agoshko, deputy chief economist for Scientific-Methodological Operations on the Kuybyshev Railroad, and V. Vishnevskiy, deputy chief of the Kuybyshev Railroad: "Transport Management. A Look at the Problem"]

[Text] The search for nontraditional methods and approaches to managing the transport process is being carried out according to plan on the Kuybyshev road. Its results were reported at the All-Union Applied Conference, which took place in Moscow two years ago at the VZIT [All-Union Correspondence-Course Institute of Railroad Transport Engineers], and at the expanded session of the Collegium of the Ministry of Railways in the middle of January of last year. The search was discussed in the published article "Byt obyedeneniya" [There Must Be Unification]. Today we offer for our readers attention an article by O. Agoshko, deputy chief economist of the road for Scientific-Methodological Operations and V. Vishnevskiy, deputy chief of the Kuybyshev Railroad.

The country's transport complex. Without creating a unified concept, strategy and tactics for its management system, it is difficult to count on solving many problems and on a radical improvement, for example, in railroad management. This pertains to both the organizational structure, transport technology and the technology of managing the transport production line. Unfortunately, notwithstanding the absence of a unified methodological base, each transport ministry has started to work out "its own" master plan for management, having started, therefore, perestroyka "from the middle," without having determined a unified strategy for transforming "from above" and "from below."

An attempt is being made to mechanically "superimpose" qualitatively new economic methods of management on the old structure, essentially conservative technology for transport and the previous forms and methods of online management, that is, to make compatible something that is incompatible. For this reason alone, cost accounting and self-financing, to put it mildly, are "spinning their wheels" on all forms of transport and are not giving, and indeed are unable to give the anticipated effect. Strictly speaking, the basic principle is being violated: the conformity of form and content. We are trying to squeeze new content into the narrow framework of the old form.

Why are new forms of management required? The former production and management structures, built on a sectorially differentiated basis, are organically breaking down the purposeful process of transport according to the various forms of transport. They, in turn, are being broken down—into a multitude of different intersectorial and territorial complexes that duplicate the higher formations. For example, the division—to the road, the division locomotive brigade—into locomotive service, etc.

The structure in this form creates powerful junctures which are an obstacle to the normal movement of freight flows, not only between the types of transport, but also within their services and territorial subdivisions.

How can these obstacles be removed? Attempts have been and are being made in various directions. At a recent school of advanced experience, which took place at Kuybyshev and was devoted to improving organizational structures, there were many brilliant speeches. They all, however, attested to the fact that the search is being carried out in directions which, in the first place, are not changing the principles of sectorial leadership, and in the second place, on a basis that is not from the standpoint of the interests of a unified transport system and the consumers of the transport product. In the third place, the management mechanisms proposed, by fulfilling only the functions of coordination, do not form in a person—a participant in the transport process—a socially active individual, and do not create the conditions for disclosing his creative potential. In addition, the search is being carried out without adhering to the most important requirements—management for production, and not the other way around.

From this follows our opinion on the necessary structure for railroad transport and the transport system as a whole. There must be a transition to intersectorial and intrasectorial cooperation of all types of transport. Because of this approach, the junctures between its different forms and within them will be eliminated, which will make it possible ultimately to heighten the responsibility of each collective participating in a unified transport process and interest it in the end result: high-quality, door-to-door freight deliveries or guaranteeing passenger service on every route that it runs.

How can these positions be put into practice? The basic working unit, in our opinion, should be the railroad, not in its former form, but, it seems to us, in the form of enterprises ensuring all the stages of transport technology. Loading and unloading are carried out by joint junction railroad enterprises. A road operation enterprise, with its own branches, created on the basis of the present road divisions, provides freight and passenger transport. The branch is an operations-dispatching center, consisting of efficient workers of various departments of the former divisions. For example, on the Kuybyshev road, according to our calculations, 20 joint junction enterprises can be organized. Three operations-dispatching centers can be made out of the six present divisions—the Bashkir and the Kuybyshev will combine with the Volga, and the Penza with the Ruzayevka. Moreover, the consolidated Kuybyshev will be combined with the road operations-dispatching center. The latter will of course have automated centers.

The fate of the divisions should particularly be mentioned. This form of territorial management of operational and economic activity has shown quite high efficiency with "manual" management of transport and with work command-administrative methods. The transition to primarily economic methods of leadership and to automating the online management of transport objectively requires a qualitatively new level of work. In our opinion, online transport management must be concentrated and centralized, which will make it possible to emerge at a completely new quality of its technology.

In making the transition to cost accounting and self-financing, the division as an economic system will essentially be turned into an intermediate one, duplicating the road. In addition, this "little" road has actually become a transmission authority between the sectorial enterprises and the services of the road management. The division has become a brake to further use of new equipment and transport automation, since the potentials for automation of dispatcher leadership of train flows is considerably greater than the polygon of present-day road divisions. Moreover, the service arms of mainline locomotive brigades do not coincide with the boundaries of the road divisions, which leads to disrupting the work and leisure conditions of the locomotive brigades is reflected in the rhythm and speed of transport and train traffic safety, and exacerbates social tension in the collectives.

The joint junction enterprise will be given a special role in the proposed system. Its basis is a unified station, made up of the major stations of the railroad junction and the operating control points technologically related or territorially drawn into it. In addition, it will include all the line enterprises of the junction, that is, the locomotive and car depots, the track section of various services, etc. All the subdivisions included in the joint enterprise should be legally independent, and should be partners with equal rights, that is, should be socialist enterprises.

Advanced structures and technology, however, need the appropriate economic mechanism. The existing one, based on the first or second models of cost accounting, as practical experience has shown, have not proven themselves. This means that there is one way out—a transition to the lease form of cost accounting.

Junction operations-dispatching centers manage the operations work at junction enterprises. They combine junction, station and freight dispatchers and operators of the technical inspection centers for cars. Their duties are precisely defined: coordinate the actions of all-encompassing, comprehensive brigades consisting of the workers of various services taking a direct part in the unified technological process at the junction. They ensure a precise processing rhythm and efficient use of rolling stock, and also create all the necessary prerequisites for unimpeded acceptance of trains at stations and operating control points of the junction.

Road-operational and all the combined junction enterprises are included in intraroad lease contracting, which encompasses all levels of production and management both vertically and horizontally.

Introducing this structure creates the conditions for qualitatively new, intensive, resource-saving transport technology, eliminating intrasectorial and intraroad junctures. The proposed structure will permit the transition to be made to qualitatively new technology for efficient transport management at three levels: junction, territorial and road.

Transferring some of the territorial and road functions to junction operations-dispatch centers will make it possible to relieve them of secondary problems of local importance and concentrate their forces and attention on accelerating the movement of the car flows on the road and promptly provide loading points with an empty consist. To form a unified scientific-technical and socio-economic policy and guarantee the protection of the rights and representations of the common interests in the corresponding bodies, based on the sectorial services of road management and their enterprises at junctions, it is expedient to organize cost accounting associations.

Perestroika of the organizational structures, production technology and online transport management will permit the transition to be made from a three-unit system—Ministry of Railways-road-division—to a two-unit—Ministry of Railways-road. According to our estimates, this alone will make it possible to release at least 50 percent of the managerial staff (joining the facilities of industrial railroad transport to the junction enterprises) and will make it possible to raise the quality of operations and economic management.

The proposed master structure of the road is the basis for working out master plans for the management of railroad transport. Moreover, a master plan for the management of the country's Unified Transport System can be created on its basis.

It seems to us that, on the basis of road operations enterprises with their automated dispatcher centers, an operations production association of the Ministry of Railways will be formed. On its basis and that of similar associations of other types of transport, an All-Union Operations Association for the country, with its own automated dispatcher center of transport management, will be created. Railroad junction enterprises, under these conditions, will become the "nucleus" of junction transport associations and a basic production unit of the country's Unified Transport System.

In our opinion, the management of the USSR Unified Transport System must be entrusted to a State Committee on Transport, at the same time changing the structure and functions of the existing ministries. It is expedient to entrust them with efficient management, coordination by the transport process and working out a scientific-technical, economic, social and investment policy.

Rail, Metallurgy Collegiums Examine Shared Problems

904H0054A Moscow GUDOK in Russian 5 Nov 89 p 3

[Article by Ye. Khrakovskiy: "Transport and Metallurgy on the Threshold of Winter: From a Joint Meeting of the Collegiums"]

[Text] Metallurgy is the major client of the railroads. About 1,200,000,000 tons of raw material, fuel and materials are transported along our steel mainlines for this sector and its output. The main client is particularly respected. Thus, on 2 November, the minister and members of the Collegium of the Ministry of Railways set off for Nogina Square to the Ministry of Metallurgy for a joint meeting. It was a question of how to put in order clear-cut interaction and achieve an uninterrupted supply of raw material and fuel to the metallurgical enterprises during the winter and how best to utilize the cars and other technical devices.

At the beginning of summer and in the third quarter, an extraordinary situation was formed, emphasized S.V. Kolpakov, minister of Metallurgy, in opening the meeting. The miners' strikes and the events in the Transcaucasus, Moldavia and the Baltic area had a negative effect on the situation in our economic system. There were many shocking events at the metallurgical combines and on the railroads. Although it was possible to stabilize the work of most of the sector's enterprises in October, the situation remains very complex.

Faced with the onset of cold weather in winter, the reserve of 2 million tons of ore, a million tons of coking coal, 620,000 tons of flux and 50,000 tons of refractory materials is not enough for the norms. The situation with respect to them is simply catastrophic. Plants are taking scrap straight from the wheels, even though the collection points are piled high with it.

The metallurgists are greatly in debt to the railroad workers. The rails and fastenings are supplied in an uneven flow, and not in the full amount. At many enterprises, an above-norm number of cars are standing idle. They are often broken and damaged and unsuitable for transport. The railroads are in a fever about the loading slumps in the first 10-day period and the sharp peaks on the last 2 days of the month, when 25-35 percent more of the daily plan for metal and 50-70 percent more scrap metal are dispatched!

The workers of the two largest national economic sectors in the country and the world—metallurgy and railroad transport—should work in a coordinated manner, should act with the closest contact—that is the task that has been set. The situation in our entire economic system will in many ways depend on this. The primary goal, as N.S. Konarev, minister of Railways, noted, is to fulfill the plan for November and December and to perform shock work on holidays. Both sectors are working intermittently and may utilize the maximum transport resources during these days.

Coordination and precise rhythm can be achieved only with closely coordinated, thoroughly perfected technology. Its basis in the transport service of a sector such as metallurgy lies in circular routes. Major technological transport systems with automated control have been created in a number of regions.

Unfortunately, however, now and then the railroad workers break up the rotation, and sometimes it is the metallurgists themselves, when they divert mainline rolling stock for internal transport, who are culpable in this respect. One of the metallurgists at the meeting commented: an all-powerful person—a prominent director of the Ministry of Railways—has only to come to some area, and they immediately begin to seize the turntables of the metallurgists for coal, building materials and other freight. They solve some urgent problems, but the technological system is disrupted and broken off and it is not easy to reinstate it.

One of the curves on the diagrams hung in the hall where the meeting of the collegiums took place amazed many people. It attested: the volume of car repair using the Moscow workers' method had dropped sharply. What is the matter? Did it not really play a role in the metallurgists' transition to cost accounting? No, they say, the railroad workers themselves have become tight-fisted and do not want to give out any spare parts nor to perform the necessary reciprocal accounting. It was immediately instructed that investigations be made and order be established. Indeed, the experiment of Krivorozhstal is widely disseminated. In conjunction with the Dnepr Railroad, it created a 24-hour mechanized working center to prepare the cars. Everything is being done here quickly, with high quality and harmoniously.

Repairing cars at enterprises, however, is, of course, a palliative, an enforced temporary measure. The directors of the metallurgical enterprises spoke with justification:

even if there are many cars on our access tracks, this in no way means that there are products to ship in them. Approximately 30 percent of the cars are unfit to be loaded. Work must be done: the consist must be looked over to find cars that can somehow be used.

Actually, there are about 200,000 obsolete, worn-out cars plying the railroads. They should have been written off and turned over for metal scrap and remelting long ago. The steel would have shown up to manufacture new, modern rolling stock, stronger, more reliable, with a lower tare weight and larger freight capacity. This is a significant word, however, for the planning organs. Gosplan avoids decisions. Moreover, in the last five years there, a sharp reduction in supplies of transport cars was planned.

The rate of renovating and reequipping industrial transport and the railroad stations adjacent to large enterprises has slowed down recently. About 200 million rubles were unutilized from 1985 to 1988. Some 140 kilometers of railroad tracks were not constructed, 24 car dumpers, 19 garages for thawing frozen freight, 40 car scales, etc. were not put into operation. How can we reconcile ourselves any longer to the fact that half of the scrap metal is being shipped in a form not prepared for transport? The necessary presses and other equipment are lacking.

Fears have been expressed that under the conditions of cost accounting industry will not invest funds in the development of the mainline transport serving it. Earlier, Gosplan allotted this money in a centralized manner. Now, however, the collectives must allot it from their own funds. Do they feel like doing this? Are they not yielding to group egoism?

The great disproportion between the development of industrial capacities and the transport serving them may be considerably exacerbated. The learned economists and specialists of the planning organs and the financiers should think about a way to eliminate these contradictions. Many other problems of the economic interrelations between industry and transport require serious scientific study.

We can count the weeks to the onset of cold weather. The winter, according to weather forecasters, promises to be a severe one. The cold has already come to the eastern part of the country. The first dozens of cars with frozen freight have already been recorded. At this meeting of the collegium, particular attention was paid to the need to complete, in a very short time, all the preliminary work, promptly utilize means of preventing freight from freezing, check all the heat-insulated enclosures, mechanisms and snow plows—in general, to do everything so that the frosts and snowstorms will not take us unawares and will not cause serious interruptions in operations. Very strict monitoring of this is to be established.

It was correctly said at the meeting: under extreme conditions, metallurgists and railroad workers always quickly find a common language. Work must thus be

done together, in harmony and with an eye for tomorrow in ordinary times, and then the extremal situations will arise less often.

Our meeting and the resolution adopted outlined measures for rapid replenishment of the necessary winter reserves of raw material and fuel at metallurgical enterprises, sending out finished products, and more careful and productive use of means of transport, particularly cars.

Both ministries, in summing up the discussion, particularly emphasized that it was time to stop pleading objective difficulties, that the litigations which had literally turned into national misfortune be stopped in every possible way and that a decisive battle must be waged against everyone who breaks down discipline and disturbs the normal rhythm of work. The collegiums resolved to appeal to the collectives of all the enterprises in industry and the railroad subdivisions to mobilize their forces and achieve stable work in the complex winter period.

Transport Union Seeks Professional Section

904H0039A Moscow GUDOK in Russian 28 Oct 89 p 1

[Statute: "On the Professional Section of the Central Committee of the Trade Union for Workers in Railroad Transport and Transport Construction"]

[Text] In consideration of the increased social activity of the workers in railroad transport and transport construction and their striving to intensify the professional trend in the activity of the trade union and to expand independence in solving exclusively professional problems, the Presidium of the Central Committee of the trade union resolved to adopt a proposal to create a professional section in the Central Committee of the trade union. Today we are publishing the draft of the Statute on a Professional Section and an interview with I.A. Shinkevich, chairman of the Central Committee of the trade union, by our correspondent.

I. General Provisions

The professional section is formed from the members and candidate-members of the Central Committee of the trade union, representing in it the appropriate workers in the profession. Representatives of the workers in the profession from the railroads and construction work, as well as qualified specialists of the ministries, scientific institutions and workers of the Central Committee, may be delegated to the staff of the professional section as necessary.

The quantitative composition of the professional section is established by the Plenum of the Central Committee of the trade union.

The professional section, acting in accordance with the existing statutes and being a working body of the Central Committee of the trade union, is created for the purpose of studying and solving problems related to protecting

the professional interests of the railroad workers and transport construction workers. The decisions and recommendations adopted by the professional section, after being approved by the plenum or presidium of the Central Committee of the trade union, are compulsory for the executors. All questions submitted for discussion at the meetings of the collegiums of ministries and presidium of the Central Committee of the trade union on problems affecting the interests of the workers in the profession are prepared and discussed with the obligatory participation of the representatives of the professional section.

The professional section will elect, from its staff, the chairman and his deputies, with their subsequent approval in the plenum of the Central Committee of the trade union.

As necessary, working groups may be created in the professional section by professions, based on the special features of the production specialization.

II. The Tasks and Rights of the Professional Section

The Professional Section of the Central Committee of the trade union:

- represents the interests of the workers of an active profession in the Central Committee of the trade union;
- participates directly in preparing the directive documents adopted by the ministries and Central Committee of the trade union on questions affecting the interests of the workers of the corresponding active profession;
- determines the priority directions in solving the most important professional problems, directed toward providing social protection for the workers in the sphere of production, organization and work conditions, wages and housing-everyday and medical service;
- studies the situation in the work collectives concerning organization of work to protect the professional interests and rights of the workers;
- analyzes the suggestions, comments and demands of the workers coming in to the Central Committee of the trade union from the sites, studies their validity and issues qualified conclusions concerning them;
- participates directly in forming the appropriate sections of the agreements made by the Central Committee of the trade union with the ministries;
- submits problems requiring urgent solution, resulting from their thorough study, for discussion by the collegiums of the ministries, plenum and presidium of the Central Committee of the trade union;
- works out and directs to the work collectives at the sites recommendations on problems of the production

and social life of the workers that are of interest in their profession when concluding collective contracts;

- submits a conclusion on the drafts of directive documents prepared, tries to defend in them the viewpoint voicing the interests of the workers in the profession, and in case of disagreement with these documents submits a proposal to the plenum or presidium of the Central Committee of the trade union on the impossibility of adopting them or on suspending their action.

The professional section of the Central Committee of the trade union has the right to:

- participate in the examination and discussion of the concept of the development of the basic directions for solving long-term production and social problems, worked out by the ministries and their appropriate main administrations, expressing the interests of the workers in the profession;
- monitor the course of putting it into effect;
- listen to the directors of the appropriate administrations and departments of the ministries and the divisions of the Central Committee of the trade union, at their meetings, on carrying out the decisions and recommendations adopted at the meetings of the professional section;
- submit proposals to the plenum or presidium of the Central Committee of the trade union on adopting measures bringing pressure to bear on the appropriate directors who display bureaucracy and red tape in matters encroaching upon the professional interests of the workers and flouting the rights of professional unions.

III. Work Procedure in the Professional Section

The activity of the professional group (section) is constructed on the basis of the special features of the appropriate active profession and is implemented on the basis of long-term and current planning.

Meetings of the professional section and its working groups are held when necessary. The professional section regularly informs the plenum of the Central Committee of the trade union of its work.

The resolutions of the professional section are adopted by a majority vote of its members.

The professional section works in close interaction with the divisions of the Central Committee of the trade union, which give assistance and help to the section in preparing materials and resolutions on the problems discussed by it and provide the necessary conditions for its work.

Expenditures related to the activity of the professional section are stipulated in the estimate of the Central Committee of the trade union.

Interview with Transport Union Boss

904H0039B Moscow GUDOK in Russian
28 Oct 89 pp 1, 3

[Interview with I.A. Shinkevich, chairman of the Central Committee of the Trade Union, by T. Smolyakov, GUDOK correspondent: "Professional Protection"; date and place not given]

[Text]

[Smolyakov] Ivan Artemovich, how did the idea of creating professional sections in the Central Committee of the trade union come into being? What is the main point of this innovation? Have other variants of structural reforms been proposed?

[I. Shinkevich] You know that our trade union combines a large number of professions. Take just two groups such as the railroad and construction workers. The staff of the railroad workers alone has a large spectrum of professions: locomotive workers, car workers and track men.... These are purely railroad workers. There are also, however, workers in the medical, trade and public catering services.... The construction workers too have not just one profession. We have scientific-research institutes.... In a word, the composition of our trade union has a long list of professions, the interests of which often differ substantially. Just how, in this large trade union, can you act so as to reflect the interests of all those included in its professions?

We thought for a long time about this—what could we do? We studied both foreign experience and our own in improving the trade union's activity under these conditions.

There is domestic experience in creating associations within the framework of a trade union. This includes proposals and certain practical steps to create associations of machinists, refrigerator workers and a number of others.

Look, for example, in the FRG and in Austria, where the trade unions of railroad workers are analogous to ours, they took a different path—creating professional sections within the framework of the trade union.

We discussed this problem with the most active trade union members, and came to the conclusion that we had to try to create professional sections. The plan for our actions was outlined at the presidium of the Central Committee. We propose forming, within the membership of the Central Committee of the trade union, specific sections by professions: construction workers, locomotive workers, car workers, track men, etc. These sections will consist of members of the Central Committee of the trade union. It is possible that if a plenum is considered necessary, other representatives of trade union organizations will be delegated there: workers and active trade union members.

We feel that the directors and members of the sections should specifically study the problems of their professions. This will be done professionally, with knowledge of the business and with interest, and their priorities will be clear.

The statute on the section should grant it the right to draw in specialists in any field, to study the problem thoroughly and work out specific proposals.

We think that the director of the section should be included in the presidium of the Central Committee of the trade union. Not a single problem should be discussed at the presidium without its being worked out in the section. That is, if the section feels that the problem of raw material is incorrectly prepared, and the plans for its solution are incorrectly proposed, it is likely that it is not the presidium that should discuss it, but it should rather be assigned for further development. That is, we wish to obtain professional interest and competency in discussing problems related to the activity of a certain specific profession.

An even larger role should be assigned to the section as an organ controlling the fulfillment of the decisions adopted.

[Smolyakov] At a recent conference on the problems of refrigerator car workers, two variants of a new public organization were discussed—an association of refrigerator car workers or a united council of work collectives. At that time you came out for the united council of work collectives. Was your opinion brought about by the proposed creation of the professional sections? If it was, does that mean that the Central Committee of the trade union is trying to prevent the appearance of various narrowly professional associations and the possible breaking up of the trade union in the future?

[I. Shinkevich] Our concern is the unity of the trade union. We do not, however, connect the presence of any type of public formations, including associations, with a threat to unity. I once said at a conference of refrigerator car workers that we support the creation of their association. Right now, too, at the stage of the preparation of this question by the action committee, we emphasize that we will not dictate to you. If you want to create an association, we will become its founders, we will help you.

Most of the action committee, however, immediately said this: we have thought about this question, and we wish to create a unified council of work collectives. How would they substantiate this? The point is that the refrigerator car services are scattered and there is no unified system to manage it. They pose problems that go beyond the framework of the association: the creation of a cost accounting association, cost accounting relations, contractual relations between the refrigerator car facilities subdivision (depot) and the main road, etc. That is, they want above all, and I see the sense of this, to solve economic and structural problems. When they began to prove this to me, I felt that it made sense to support

them. In general, that is the right of a constituent conference—to decide what they will have.

I think that the creation of sections should not be regarded as an attempt to neutralize initiative. We discussed this question widely among the active membership of the trade union, and most of them now see the sections as the most acceptable variant. Why? An association is fine, but it does not have full protective rights, those that the trade union has.

[Smolyakov] But if the Central Committee of the trade union is one of the founders of an association, this means that it should also become the guarantor of these rights.

[I. Shinkevich] The founder is, after all, only the founder. It will help financially and in organizing the plan. Of course, we can carry out their proposals jointly, by using our rights. We can also work, and more efficiently, with professional sections. We can even head these sections with people released through the trade union.

The whole problem is how we will succeed in organizing and starting up the work mechanism of the sections. Therefore, we do not want to make many sections right now. At the first stage, probably, somewhat less should be done, for the most important professions. For example, the sections of the construction workers, locomotive workers, car workers and track men. We will see how things go, and how we succeed in organizing their active work, so that they do not just meet, but so that this will be a permanently existing body of the Central Committee of the trade union—so that it passes all the questions through itself.

The most important thing... We now have an organization of the Central Committee, and there are divisions for wages, for labor safety practices, for everyday problems, etc. The section can use this staff and these specialists to organize their work, which means the divisions will not control it, but will be its assistants.

[Smolyakov] In any social work it is very important to know who is backing you. This also gives a feeling of confidence and a feeling of responsibility. Since we mentioned the association—that is one parallel. The pilot's association can also be regarded as a professional section in the Central Committee of the Trade Union of Aviation Workers. There is an essential difference, however. The work collectives elected the council of the association and the president through their own delegates, that is, specific people and collectives were backing them. If, let us say, the council turns in the wrong direction, the collectives will voice their distrust in it, will hold a reelection, or will disband the association. In our case, the chairman and the members of the section will be elected at the plenum from members of the Central Committee, and that means that the Central Committee of the trade union is behind them. Is this normal?

[I. Shinkevich] In the first place, I think that creating associations is not a universal panacea. I feel that where

the trade union is strong, where it truly defends the rights and lawful interests of its workers, there should be no question of creating associations just for protective functions—what use is the trade union then?

The need to create these associations is dictated by the weakness of our trade unions, by the fact that they do not always protect rights the way the rank-and-file members expect. Therefore, it must be looked at this way: do we need a trade union that needs props? I feel that the trade union should be energetic and that it should be up to the mark.

Another matter—the procedure for forming the sections. Our task is to make it the most democratic. Right now, when we already have the staff of the Central Committee, of course, it will be more difficult: perhaps some of our professions will not be represented as they should. We can delegate here, however, representatives of the work collectives as necessary.

[Smolyakov] Yes, this is stipulated in the draft of the statute. But how do you visualize the mechanics of this delegation, and who will determine “as necessary”?

[I. Shinkevich] Well, let us suppose that there are five or six depots on a road. Can they delegate their most authoritative representative to the staff of the section? They can. We can obtain this directly from the work collectives. The most important thing is that these are not representatives of our bureaucratic staff, but true men of the plow, as they say. They are interested. If it is a section of locomotive workers, they must be engineers, if it is one of track men—they should be track fitters, etc., that is, people who know, who work under the specific conditions. Probably the director of the section should be elected at the meeting of this section, and be the most competent, authoritative and knowledgeable. We do not want pressure from above. We will propose these sections to the plenum of the Central Committee of the trade union and will work out all the approaches and the statute on the section there. The final decision is for the plenum.

The plenum will probably also determine the composition of the section—for example, 20 persons, I will say conditionally. We have in the Central Committee 5 persons, and the rest must be elected in the work collectives. We think that the structure of the section should be the simplest, so that it can operate, and the members of this section can operate, and not some sort of bureaucratic superstructure.

[Smolyakov] This means that the section will consist of people who are not released from their basic work. Often they cannot assemble, but this is necessary for fruitful work—particularly, since the training and participation of the members of the section in all the meetings of the collegiums of the ministries and the presidium of the Central Committee of the trade union on their subject is presupposed. Is this really the case, however? Will it not turn out that the entire load will be carried by the one or

two persons who live in Moscow, and the rest will assemble once a quarter, and that is all?

[I. Shinkevich] Well, this is probably also true of the association. It can be solved here in the same way it is solved there. I think that some sort of basic rights for the section should be issued here. If the director is a member of the presidium, he will always be present, and the rest can attend if they are interested in the problem being discussed. The most important thing, I emphasize, is that this question must first go through the section. It should prepare it, and it should give an evaluation.

[Smolyakov] I am afraid that only one person will do the preparing....

[I. Shinkevich] This is what we should avoid.

Increasing the protective functions of these sections lies in their working on equal footing with the main administrations. They can, however, ask many questions on the working procedure. In a word, if it is a mobile, interested group of representatives of the profession, it can solve many problems.

[Smolyakov] Can solve or will solve? We have come to the main question. The Central Committee delegates some of its rights and concerns to the sections. They will have no additional rights. Indeed, the section should pass any of its decisions through the presidium of the Central Committee. In this situation, will creating sections actually help to reinforce the influence of the trade union on the policy of the ministries? Will they not become an additional source or gatherer of information for the Central Committee of the trade union and the presidium?

[I. Shinkevich] It is not worthwhile creating them for information. It is a question of the professional approach to carrying out the protective functions of the trade union. We said at the very beginning that we have a great number of professions. Perhaps the presidium of the Central Committee has not even noticed certain problems—the sections should notice and promptly raise these questions, and they should notice the new phenomena which are taking place in the subsector both in problems of cost accounting and in problems of interrelation with other structural subdivisions, in problems of benefits, etc.

[Smolyakov] After all, though, this is gathering information....

[I. Shinkevich] No, not only. After all, they should prepare the resolutions and proposals.

[Smolyakov] Well, let us assume a century-old, well-known problem such as organizing the work and leisure of the locomotive brigades. Now a section of locomotive workers comes along. How can it actually change the situation? Well, it prepares convincing, deadly facts. But this has already happened: our newspaper has written about this many times, and you have discussed it many times at the meetings. Well, the section will once more

present an invoice and additional arguments. Its rights, however, cannot be increased, for it cannot jump over its own head.

[I. Shinkevich] No, you understand, that is the point. Each level should solve its own problems. I think that the directors of these subdivisions and trade union committees should study the problems of the work and leisure of the locomotive brigades on the road and on the section in each specific case. We cannot go from here to each division, to each locomotive depot. It would not be fair of us to face the professional sections with these problems.

There are some general problems which are characteristic of our level. Let us assume, for example, a locomotive brigade has a long time at the turn-around point. It is considered free time, without pay. Is this correct? We think that it is not correct. We have now managed to secure from the ministry partial pay for this time. There is a great field of activity for the sections in questions like these.

Or take the work conditions for a locomotive engineer. The effect of the magnetic field, the noise, the vibration. Or problems of wages. Why is a mainline engineer paid one thing, a reserve—another, and if you drive a passenger train—something still different? Of course, it is probably more difficult to operate a freight train than to drive a passenger train. The person has come to work, however, and the administration should give him the opportunity of earning the maximum. This is a general problem, and we should work out general approaches to solve it.

I am naming only the problems that we know and have been working on. After all, there are still, probably, dozens of general ones for the whole professional group. They should also be revealed and raised by the section.

We should not put the question this way: what the ministry is doing, that's fine. We should somehow dictate our demands on questions of work conditions, wages and organization of labor. So, who will express these demands in the most professional manner, if not the section? Let us assume that I am a transport worker with long service and, of course, I can judge professionally on traffic problems, but I cannot judge the work of the locomotive workers on the same professional level. It is the same for all the rest. For this reason we want all the questions related to a given profession to be passed through the appropriate section, which should say: to be or not to be.

Any good idea can be messed up, especially at the beginning. Therefore, I repeat: we do not want to create a large number of sections immediately. We must work out the approaches, adjust the work system, and pay the maximum attention to the first sections at the very start of their activity so that the people can see their usefulness and efficiency.

KGB Interview on Moscow Railroad Support

904H0064A Moscow GUDOK in Russian 10 Nov 89 p 2

[Interview with O.V. Kharlamov, subdivision chief of the USSR KGB [State Security Committee for the USSR Council of Ministers] Administration, by A. Rostovtsev. GUDOK correspondent: "In the Shadow of a Shady Economy"]

[Text] Many municipal services are trying to "put right" the tense situation that has formed in unloading at the Moscow Railroad junction. Associates of the Committee for State Security are linked with this work. A Gudok correspondent met with O.V. Kharlamov, subdivision chief of the USSR KGB Administration for Moscow and Moscow Oblast on Objects of Transport and Communications, and asked him to answer a few questions.

[Rostovtsev] Oleg Vladimirovich, it honestly makes one wonder: what does your organization have to do with unloading railroad cars? In my opinion, this is strictly an economic problem.

[Kharlamov] Let us look at the situation that has formed from a different standpoint. Security officers, in fulfilling their tasks within the framework of their competence at railroad and motor vehicle transport facilities, could not pass by the ugly things happening before their eyes. It was decided, with the Moscow city and transport offices of the public prosecutor, to monitor the state of affairs at the freight yards of the Moscow Railroad junction.

I will also note the "feedback": as soon as they found out at the stations that we were checking up, the people began to come to the committee workers, telling about the ugly things that were going on. Now everyone realizes—order must, at last, be established. This is the first thing.

The second thing: it is confusion and negligence that create the prerequisites not only for theft, but also for channels to appear along which phenomena such as organized crime and shady economics can flow. It is worth repeating the truism that smart operators try to tie up all the links in their work, including the transport of "left" [not quite legal] products. Finally, you have forgotten the main thing. We are protecting the interests of State security. How else can you evaluate the present state of affairs, if not as a serious phenomenon having a substantial effect on the state of the country's economy? After all, all this paralyzes transport work.

[Rostovtsev] Perhaps I misunderstood you, but you probably have sabotage in mind?

[Kharlamov] Not necessarily. Irresponsibility at times gives results that are not inferior to sabotage. As for the latter, the discovery of these facts is purely our duty. We work....

[Rostovtsev] If possible, Oleg Vladimirovich, let us in on just one secret. Which one of the crimes recently linked to the railroad bothers you most of all today?

[Kharlamov] Everything bothers me. What I am going to tell you also arose because of the situation formed recently. This is what the crime was connected with. A container with Japanese equipment, including 93 television sets, worth 150,000 rubles, was brought to the Moscow-Pavelets station. Judging by the acceptance log, it was unloaded. Then this entire overseas marvel of equipment... vanished to parts unknown, along with the permits and other documents.... Investigations are now in progress. There is no doubt, however, that this was not a one-man job.

[Rostovtsev] One-man jobs have probably been difficult in general recently?

[Kharlamov] I do not think it is all that complicated. Once again I repeat. Mismanagement mainly affects prompt unloading and the number of legal violations. Incidentally, we analyzed the data obtained in two weeks of monitoring, correlated them and compared them with the experience of the past years. Approximately 55 percent of the blame lies with the consignees, 30—the motor vehicle operators and half as much—the railroad workers.

[Rostovtsev] What specific facts of mismanagement have the KGB associates discovered in the last two weeks?

Oleg Vladimirovich suggests going into another room, where there is a videotape recorder, and we look at shots taken two days before the holidays.

Moscow-freight yard-Pavelets. It was as if Mamay and his hordes had arrived. There was an avalanche of containers and broken cases with equipment spilling out. The camera transfers us to the glass containers warehouse. By the way, it was hard to identify the packaging. There were mountains of broken bottles in the wooden boxes that had been deposited there lopsidedly.

"This freight comes from the Livanovo station," a warehouse worker explained. "It is always like this. When we open the doors of the railroad cars, broken glass pours out on us. We gather it up by hand."

Another station worker told us that for several months, 20-ton containers of cocoa beans stood here, which had only to be shown to the commission of the office of the public prosecutor and the KGB to be taken away in one night. "Otherwise, they would have been rotting here...."

At the Mitkovo station, Sh. Kvachekidze, the chief, explains it:

"We are virtually powerless before the consignee. We have almost no rights—after all, we do not even have the right to impose a fine. We take money only for storage."

Meanwhile, the camera shows huge heaped up girders, obstructing everyone and everything (for six months, the customers have not taken them away), reinforced concrete blocks, designed for the automotive industry department, and imported machine tools standing straight up... on the tracks.

"At the Moscow-Yaroslavl station we discovered whole rolls of paper addressed to the Dukat Factory, which have been lying there for over four years now," comments O. Kharlamov. "Just imagine, this is at a time when there is a catastrophic shortage. And here is a case of yet another 'magic transformation' of Japanese equipment at the Pavelets station. I came here over a month ago and, as it turned out, so did a large container with thousands of cassettes for tape recorders. There were no declarations at the legal protection authorities, and on 4 November Ye. Demidov, director of the group of KGB associates, who worked on the commission's staff at the station, got an explanation from V. Golosker, director of the forwarding office of motor vehicle combine No 15, on the measures he had taken. Just imagine: a few hours later the container turned up at a station.... Guryev on the West Kazakhstan road."

[Rostovtsev] Oleg Vladimirovich, at the start of the conversation you offered to present the situation that has actually formed. So let us assume something impossible today. The railroad workers are working ideally, the motor vehicle drivers remove the freight on time and the customers unload it in a few minutes. The shelves of the stores are filled with goods, and we are glad to buy them....

[Kharlamov] Actually, something would have appeared on the counters. The ideal picture that you have drawn, however, will in no way become a panacea for all our general woes. In spite of everything, however, order in unloading the cars should be established this year.

[Rostovtsev] But you said that this was not the first year such a situation had occurred, and apparently, not the last. How do you regard the future? With optimism? Or?....

[Kharlamov] We know that a dilettante judges a phenomenon according to the consequences, while a professional seeks the cause. The security guards never set themselves the task of making more arrests, even though the inevitability of the punishment is one of the principles of our activity. Our goal is to investigate the roots of the situation down to the fine points and to work out a program for the future, to work out, on a legal basis, a system of measures which must be taken as a way out of this blind alley. Moreover, all together—the office of the public prosecutor and the police and the national guard and us, and of course, the managers. Therefore, we will not only improve the supply, even if only a little, for the population, but we will also solve one more problem: we can knock out the most important—the transport—link in the chain of the shadiest economic system.

[Rostovtsev] Oleg Vladimirovich, the last question will perhaps not surprise you. Too much has been said about this, and who, if not you, will know the answer better than any others....

[Kharlamov] I already know what you mean. We have actually had signals come in about groups of thugs going to the stations and keeping the cars from being unloaded. Seemingly serious. There was even talk of arms. The associates of our administration monitored over 60 such signals from party and economic authorities, and from ordinary citizens. As a rule, however, they had no specific content. Actually it turned out that the "witnesses" of these instances themselves made use of the gossip. Nevertheless, we sent efficient groups to both the station and the fruit-vegetable bases. In our opinion, the actions of some loading-unloading cooperatives and brigades of staff freight handlers, striving for the monopolistic right to perform the most advantageous work, could be the reason for rumors circulating, as well as the threats and money of those "eliminating" competitors.

By the way, a word about cooperatives. I think that they are giving useful assistance in unloading the cars. Is it right, though, that in some cases they are headed by railroad workers—directors of subdivisions who should deal with these problems on the strength of their own official duties? For example, at the Moscow-freight yard-Kursk station we recently talked to Ye. Grishanov, chairman of the Zhedlor Cooperative, who informed us that he has A. Grishin, deputy chief of the Moscow-Kursk track section for loading and unloading operations, working for him. Well, and at the Moscow-freight yard-Ryazan station, a similar cooperative, Trud, is commanded by M. Paykin, the chief himself, now of the Moscow-Ryazan track section. I will not speak about the moral aspect, but after all, this is a clear violation of the Law on the Cooperative.

[Rostovtsev] All right, let us sum up our conversation.

[Kharlamov] It should be noted that, as the result of the measures taken by the Party, Soviet and legal protection authorities, the situation with respect to unloading and sending off freight from the stations of the Moscow junction has partially improved. In my opinion, however, in order not to have recurrences, there must be an immediate and radical change in organizing the work at the stations and container areas which are leased to the motor vehicle drivers. The system of fines must be made more rigorous and orderly, the tremendous number of contradictory departmental instructions be reduced to a unified common denominator, the work of motor vehicle transport put into order, etc.

Cost of Maintaining Locomotives Viewed

904H0064B Moscow GUDOK in Russian 21 Nov 89 p 2

[Article by S. Ayzinbud, professor of the Rostov Institute of Railroad Transport Engineers, doctor of Technical Sciences, Honored Transport Worker of the RSFSR: "A Repair Doctrine"]

[Text] Last year it cost the sector over 280 million rubles just to put diesel locomotives into better condition

Approximately 80,000 persons are engaged in putting locomotives into better condition. The repair industry, although we complain about its poverty and limited potentials, continues to expand the machine tool park, provide electronic equipment and increase capacities. The expenditures to keep the machinery in good working condition are accordingly growing, and not only on the railroads.

A no-repair philosophy is completely unacceptable to us with respect to equipment. The doctrine of repair—that is our philosophy. Although it is quite obvious: the cost of an electric locomotive or diesel locomotive as a minimum, triples during operation. This should make us think—is this the way we manage things?

The technically developed countries profess to a different system—a no-repair one. We also had attempts to "go to the people." We remember the 1950's—the initiatives of some roundhouses to make the transition to a large-unit method. They were not developed, however, and did not become the rule.

Many people were frightened away by some of the initial expenditures, which hid the obvious economic sense of the method. Some of the scientific-research institutes in our country worked out structures and approved operation variants of disposable traction motors, gearing and bearings. These units were estimated for mileage of up to 2-2.5 million kilometers, that is, until plant repair, when they would be replaced with new ones. The effect from operating these assemblies and units considerably covers the slightly greater expense to manufacture them.

The turn to an advanced system has not yet come, however. There are, of course, reasons. One of the main ones is the poor quality of virtually everything that the railroad transport workers obtain from industry. For example, the life for the gearing of traction reducing gears for locomotives has been determined as 1.8 million kilometers, which is performance closely approximating that of a disposable one. Practical work has "cut" the indicator almost in half. One million kilometers and—in for repair. Incidentally, locomotive workers are already beginning to get used to the fact that the gears of these transmissions need maintenance after a half million kilometers—that is four-fold worse than was thought.

Why? The Novocherkassk Electric Locomotive Building Yard, for example, still uses old technology to process the pinions. The teeth drop off.

I am not going to start going into details—which materials, structures and technology are suggested by science, the planning institutes and the laboratories. I shall say only that the plants need no innovation, it is not advantageous for them, if only because the Ministry of Railways will snatch what they provide. There is a "quantitative" race, and there is no time to think about quality.

Talks have been going on for a long time at the Novocherkassk plant about disposable units for electric locomotives. The verbal side of the matter has been completed, so to speak. Again, because the Ministry of Railways is avoiding claims. It turns out to be more convenient to develop and expand the repair plants, to convert the locomotive roundhouses with a large machinery park almost into plants, and even to be proud of this.

An aim like this encourages an industry to "go on" worsening the quality of the equipment and reducing the between-repair mileage, which is shamefully short as it is. Meanwhile, there are data on operating electric locomotives and diesel locomotives generally without repair with mileage of up to 2-3 million kilometers in Italy, France, the FRG and the United States. There is no need to spend money on maintaining gigantic roundhouses and repair staffs. We, as if to spite common sense, have not just turned away from world experience, we are stubbornly moving in precisely the opposite direction.

After all, in the last two decades, our locomotives have become even sicker. The wheel pair tires wear out before your eyes, and need machining every 40,000-50,000 kilometers. The diesels have begun to be removed along with the generators, not only on the TR-3 (hoisting them the old way), but also on the TR-2, that is, in routine repair. The real owners of this major unit do not trouble the plant at all—there is nothing to "tinker with" in the roundhouse. It is precisely "tinkering", because the stereotyped roundhouse repair differs from plant repair in that a great deal is done manually, and quality control is essentially visual, and indeed, even subjective—that is, whoever has done the "tinkering" evaluates it.

The quality of the electric locomotives and diesel locomotives acquired from the machine builders by the Ministry of Railways is also characterized by the machine operators joking about the fact that, to replace a safety device, you have to take apart half the electric locomotive. The fitters talk about the fact that it is impossible to reach the parts until there is some sort of "breaking up". The plants seem to contradict themselves—the equipment that they create is in no way for

repair-free operation, and the units are put together in such a way that it is impossible to replace them without considerable dismantling.

The directors of the locomotive main administration know about this. They, however, are placed in the position of a perpetual supplicant, and are forced to be grateful to domestic industry just for the fact that they have been given at least something. After all, the Ministry of Railways pays a lot of money for the machinery.

It probably makes sense to think about a wider market and attempt to purchase locomotives abroad. The Ministry of Railways has this sort of practice—in the past it has acquired small series electric freight and passenger locomotives from Czechoslovakia. The equipment was distinguished by its quality and longer life.

When the subject turns to disposable equipment, it means raising the level of technical service, the operating standards and maintenance of the machinery. We cannot, unfortunately boast of this, either. That is why it is turning out this way, and must be spoken about at the forum of the railroad workers.

The opponents of repair-free machinery operation bring in a "shock" argument: we are not so rich that we can introduce Western technology. All the same, it appears that no "excess" money is needed. It is simply redistributed. What is being spent now to maintain the army of repairmen, will go into creating diagnostic complexes. What we are spending on spare parts and warehouses for them we will invest in raising the quality of the locomotive, etc.

It is possible that my arguments are not indisputable. Let me argue from a professional standpoint, however. What do we have, if not our science? What are we, cut off from foreign experience? Or is it so complicated to switch over part of the engineer corps of various administrations and planning design bureaus from repair bookkeeping and petty improvements to the development of a domestic system of repair-free operation?

The greater railroad council must now simply think about putting this question on the agenda. Competent specialists must be found for an analysis and a comparative expert examination of the two concepts of operating locomotives in the country.

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